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# An app-ealing proposition

In what is likely to go down in history books as the “deal of the decade”, WhatsApp’s acquisition by Facebook for a whopping \$19 billion caused quite a stir not just in Silicon Valley, but the world over. Up until this point, everyone knew there was money in Apps but no one could have ever imagined we’d be talking about *this* kind of money. To put into perspective the kind of money we’re talking about, consider these stats: Sony, a company in existence for more than 60 years, has a market cap of \$17.8 billion. Or LG Corp, that’s considered a conglomerate in Korea, has a market value of a mere \$10.2 billion (‘mere’ is relatively speaking, of course). It’s fascinating that a company that didn’t even exist until a few years ago is now worth \$19 billion. That’s how BIG this WhatsApp deal is.

What’s more ‘app’ealing is the rags-to-riches story of founder Jan Koum; it’s like something right out of a plot of a Sidney Sheldon novel or a ‘90s Bollywood movie.

Koum, a first generation immigrant, was born in a small village in Ukraine to working class parents. His mother was a housewife and father, a construction foreman. His beginnings couldn’t have been more humble – his house didn’t have hot water and the Soviet era surveillance society curtailed more than a few liberties that you and I would take for granted. At 16, when he finally emigrated to Mountain View, California with his mother, he took up odd jobs like sweeping grocery stores to help make ends meet. His focus and determination, however, remained unwavering. He taught himself networking by reading used books on a returnable basis. Koum eventually joined a hacking group where he honed his skills and got himself a job later at Yahoo! This is where he crossed paths with future co-founder of WhatsApp, Brian Acton. They worked at Yahoo! for nine years and witnessed many ups and downs in the company as well as in the industry as a whole. In an ironic twist, both were rejected by Facebook when they applied for jobs with their would-be purchasers. Eventually – after a year of drifting – Jan built the backend for an early version of WhatsApp that was limited to showing status messages in the iPhone’s address book.

Years later, the story finally culminated in a rather poetic end. Jan Koum chose to sign the multi-billion dollar deal in the same building where he used to receive government aid in the form of food stamps. His passion for technology enabled this smart immigrant surviving on a hand-to-mouth sort of existence 20 years ago to be worth an estimated \$7 billion today thanks to his 45 per cent stake in WhatsApp.

I’ll leave the analysis of the financial efficacy of the deal to the Wall Street pundits, but from a technology standpoint there are two things to learn here: 1) If you have an interesting idea, technology-based enablers such as apps, websites or rapid prototyping can help you see your idea take shape in reality without much sunk costs. 2) Like WhatsApp, you don’t really have to go the advertising way if you’re providing a service that’s critical. If people want it, they’ll be willing to cough up money for it.

“But this is a one-off occurrence,” you might say. Yes it is, but a closer look at a few revenue stats from the four biggest app stores surprised me. In 2013, the iPhone App Store raked in \$6.4 billion in revenue while Android drew in a significantly lower revenue of \$1.2 billion, but it’s still indicative of how lucrative apps can be. Even the Windows Phone marketplace, which in comparison to these two is miniscule in terms of total app downloads, revealed some interesting figures. It gathered revenues of only \$0.95 billion but developers made about \$0.23 per download, compared to Android developers who only make \$0.04. As you can see, there’s money everywhere in the app universe for the taking. You just need the right product to make your own success story. 



**Siddharth Parwatay**  
Assistant Editor

[siddharth.parwatay@thinkdigit.com](mailto:siddharth.parwatay@thinkdigit.com)

**“If you have an interesting idea, technology-based enablers such as apps, websites or rapid prototyping can help you see your idea take shape in reality without much sunk costs.”**



Got feedback about this column?  
Drop me a line at:  
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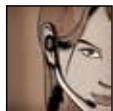
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✉ Hi Team Digit! This is my nth letter to you. First of all, the cover page and the cover story were really impressive. I can't even begin to imagine how you manage to bring out the monthly issue (containing a separate review for every gadget, tests and comparisons, cover story, Tips and Tricks etc.), DGT, Fast Track and 2 dual layer DVDs, all in less than a month.

Web Watch has been one of the most interesting sections. Space Age made me go "wow". In Buzz, there was a serious overdose of steam machines. I was surprised to find that Galaxy wasn't nominated for the 'Gadget of the Year' voting poll in the Connections section.

One complaint is that you never reply to the questions I ask via email. (sos@thinkdigit.com). And you still haven't reviewed Samsung's flagship device, The Note 3. Why? One thing I want to see in the Bazaar section is the verdict of every reviewed gadget at the end of its review, for example, something like "Buy it or junk it".

It will be great if you can include coverage from Samsung's Unpacked event in the DVD, All the best for the future.

—Harsh Khurana

4 Always nice to hear from you Harsh. You've become a "regular" now. We always try to implement suggestions we receive from readers like you. About your sos mails, we'll try to be more vigilant. We get a lot of queries there and sometimes we can't answer all of them. You can find a review of the Note 3 here: [digit.in/Note3Rev](http://digit.in/Note3Rev)

—Siddharth

✉ Hi Digit! I'm one of your magazine's biggest fans. I've been addicted to it since the past six months. The February issue's cover story was first rate work. The Fast Track was also very informative.

Some suggestions:

1. While the DVDs are quite good, there's room for improvement. You should provide security apps and other apps for Android. Try to provide games like Assassin's Creed, WWE etc., in the DVDs for the special issues.
2. Add more pages to DGT and the magazine.

### Feedback for the February 2014 issue of Digit



3. Your website isn't that bad, however it still requires some creativity as it is India's #1 magazine's website.
  4. Review some newly released software. I have two questions for you:
    1. Suggest a good anti-virus for me?
    2. I'm currently using Windows 7 Ultimate, and I have trouble starting Windows Help and Support as it doesn't start and gives an error message.
- Finally, the only thing I want to say is: Keep up the 5-star work!

—Shubham Kakoty

4 Thanks for your feedback. We're constantly working on improving DGT and the website. As for reviewing software, you're right we should start covering a few more software than just the antivirus solutions we review on a regular basis.

1. Try Avast! We've been using it for quite some time and it's pretty good.
2. Fix the issue by following the step-by-step guide available here: [digit.in/CantStart](http://digit.in/CantStart)

—Siddhant

✉ Hi guys. This is my first letter to you. Firstly, I should congratulate you for bringing out this fabulous magazine called Digit, which has been providing me with technical information since 2012. The February issue was excellent.

You won't believe that it was the first time I saw a gun like PGF, which was cool. Even the review for the Galaxy Note Tab 10.1 was good. I liked Digit Diary a lot which had plenty of funny material about 'The Ant'. Well, who is the Ant? Lastly, thank you for bringing out such an amazing magazine.

—Ayush Kumar

4 Hi Ayush, nothing makes us more happy than finding that our readers like our work and they've learned something new from our work. As for your question about 'The Ant', well the Ant is a short name for Siddh'ant, a member of our team. You'll find some surprising news about him in the diary this time as well. Have a look.

—Anirudh

✉ I've been reading your magazine since Chip shut down and I should commend you for compiling all those great articles. Your team's effort is very well reflected in the quality of your magazine. Fast-Track is the most awesome part of the Digit package, and the 'Fast Track to Tech Careers' was a good resource since I'm in my 12th grade. Well, I have questions pertaining to that. What is the minimum qualification requirement for employment with Team Digit? I want to pursue B.E. I score well only in Computer Science but

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[dgit.in/eldang](http://dgit.in/eldang)

### LETTER OF THE MONTH

☑ Hey guys. I've been reading Digit for at least 2 years now. This is my second letter to you. The first one I sent in January was a bit late.

Let's start with DGT. This was one of the best DGTs. TBA section is always awesome and I might go to see 'Her'.

Questions & requests:

1. Why is Siddharth's column called "Static Page"? The column was awesome and I'm going to use his quote in my school debate.
2. The cover story was amazing. 'God vs. Science' was the best. I wonder whether Prakrit is still alive after having written that article. Why didn't you add Mavericks vs. Windows 8?
3. The Tips & Tricks helped very much. Digit Diary made me laugh out loud. Dogs drooling from their anuses? Seriously? That was nasty. Fast Track was good. It influenced me to such an extent that I've started mining Bitcoins.
4. Who is Pony?
5. Tower Defence2 in SKOAR! DVD
6. Is Xolo q500 a nice phone?

P.S: Hope you like the drawing.

- Martand Saili (Mussoorie)

📄 Well, first of all a big thank you from all of us here. We don't normally get physical snail mail but when we do, it makes our day! Letters are atavistic of



a bygone era and there's something just so nostalgic about them. Any particular reason for going paper though? As for your questions:

1. We've all asked the same question to Siddharth many times over now and all we ever got from him was a non-committal and yet mysterious slow nod. It may also have something to do with his strange ability to static shock people time-after-time in the office. Insulated shoes perhaps or maybe the evil powers of science are at work here.
2. We're glad you liked the article, Prakrit is still alive though, he groans all day and spends an inordinate amount of time in the facilities. We don't know about the almighty, but it looks like the gods of digestion aren't too pleased with him.
3. Mining bitcoins on GPUs is no longer feasible and you'll end up spending more money on electricity than what you'll earn. But good to know you've learnt something new.
4. Prakrit is "Pony".
5. We'll add that to our list of DVD ideas.
6. The XOLO Q500 is an old phone now and you'll get much better options like the Motorola Moto G for example. We loved your drawing and posted it on our Facebook page as well. Keep writing in.

-Siddhant

have a problem in other subjects so I don't think I'd do well in my entrance exams. I might get through my boards following which I'm thinking of doing B.Sc. I'm interested in Programming and a little professional advice would be helpful. My positive traits are my good communication and writing skills. Please guide me.

- P.C Abhishek

📄 Thank you for your kind words Abhishek. It's nice to hear that you liked the FastTrack to Careers. As they say

Coding is the new literacy and you should keep programming. The requirements for working with Digit are quite straight forward: decent communication skills, an interest in technology and the desire to learn new things.

- Mithun

☑ I really feel like Team Digit is my friend because of your support and extraordinary effort in feeding the tech hungry of our nation. I'm very interested in Technology and that interest led me to

choose Digit magazine. You may find my story about how I stumbled on to Digit interesting. I purchased my first edition in October 2013 during a journey to Hyderabad when I was searching for tech related books at a book stall on the railway platform. The shop guy initially said there are no books on Technology. I was about to leave the shop but then he showed me Digit. The cover and even more the FastTrack on Cloud Services published that month made want to pick it up instantly..

The price, however, dissuaded me from buying it for a few minutes. But then the thought of missing a chance to know more about technology got the better of me. And so I bought the magazine.

After reading that edition, I wholeheartedly thanked the shop vendor in my mind for showing me the magazine that day. Before reading the FastTrack, I was of the opinion that cloud services were for only storing data. But the magazine showed me the various ways in which cloud services could be used. So, I asked my father to subscribe to Digit and he hesitatingly agreed but now he too feels happy reading it.

I was about to buy a laptop when coincidentally you published a laptop comparison test in the magazine that helped me make an informed decision.

I have an interest in developing apps for Android. So, I request you to provide tutorials regarding app development just as you did with video games development in the February issue. Also if possible, please provide software related to photos and video editing in the DVDs.

Thank you very much for regularly providing Avast anti-virus updates in the DVDs every month. This is very useful considering my locality has poor internet facilities. I also want to thank all your team members and I have no complaints regarding any of the 5 editions.

-Prem Sai Daggula

📄 It was indeed interesting to know your story of how you bought your first copy of Digit. It's good that you're interested in app development because it has a lot of scope. Read the editorial this month to know about the motivational story of a developer. Thanks for all your suggestions and wishes.

- Siddhant

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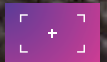
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### WD slims down

WD launched My Passport® Slim™ – the first 2TB thin drive with a metal case and hardware encryption: <http://dgit.in/1iSzyB1>



### Edimax levels up

Edimax launched the World's First 3-in-1 High Performance routers that enhance wireless range and coverage: <http://dgit.in/MitUMR>

# Ring out the old, ring in the new

As some technology slips out of the competition, new tech enters with gusto

## Indian PC shipments fall 20 per cent

According to a new Gartner report, the Indian PC market fell nearly 20 per cent to 1.96 million in the December 2013

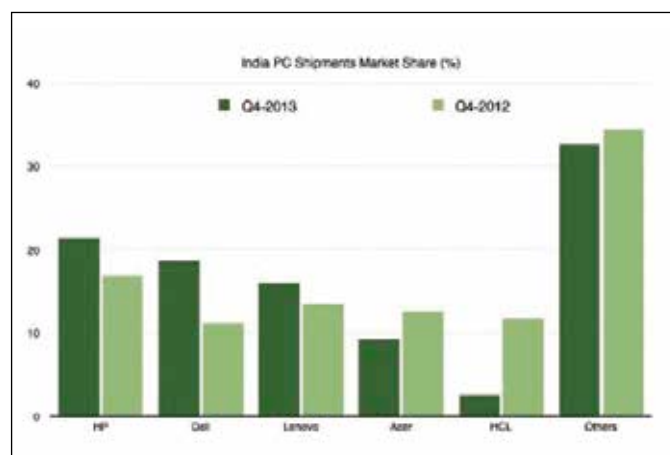
HP remains the market leader with 21.3 per cent, followed by Dell with 18.6 per cent market share. Lenovo was third with 15.9 per cent, followed by Acer and HCL, each with 9.2

region. Now PC manufacturers are taking drastic steps such as selling off their PC businesses, just like Sony recently handed over its Vaio PC business to Japan Industrial Partners.

the time of its launch, the Maruti 800 was priced at ₹50,000. The current price of the car is about ₹2,35,000. It hasn't just been successful in India. Over the years, the Maruti 800 was exported to several countries, including Nepal, Bangladesh, Sri Lanka, Morocco and a few European countries.

The first car was sold to Harpal Singh in 1983 who owned the car throughout his lifetime.

Tata's Nano tried to take its spot as the most affordable car in India, but the Nano couldn't outsell the 800 – even in its last year of production. Maruti hopes the Alto 800 will fill Maruti 800's shoes, and so far it's doing a good job. The Alto is



quarter due to declining government and enterprise orders.

The report states that Mobile PCs such as notebooks saw an increase of 27 per cent over the past year; whereas white boxes (including parallel imports), which accounted for nearly 44 per cent of the overall desktop market, declined to 10 per cent from a year ago in the December 2012 quarter.

Due to the 49 per cent growth in its notebooks, the Dell Inc. market share increased in the October-December quarter. Dell sales grew 70 per cent in the consumer segment. On the other hand, HP's market share in the consumer segment grew 3 per cent over the year-ago quarter.

per cent and 2.5 per cent of the market share.

"Consumers accounted for 49 per cent of total PC sales in the fourth quarter of 2013," said Vishal Tripathi, principal research analyst at Gartner. "In the absence of any government orders this quarter, the Indian PC market performed dismally, re-emphasising the fact that with current economic sentiments and the current political scenario, enterprises are deferring their purchases", he continued.

According to a recent IDC report, PC sales in Asia have fallen due to competition from the mobile devices and slow economic growth. PC sales declined 10 per cent in the Asia Pacific

## The last of the 800s

For nearly 30 years, it was the best selling car in India, but the Maruti 800 is now on its final journey. The last model of the red Maruti 800 car was rolled out from the company's Gurgaon plant on January 18, 2014, and sent to a dealer in Shillong.

Since it was first manufactured in 1983, the 800 single-handedly revolutionised the automobile industry in India. It was popular among the masses and held its ground as the most



Harpal Singh and his wife, the first owners of a Maruti 800

common choice among carriers for middle class families. Since its production, Maruti has sold 2.5 million units of the car. At

consistently ranked as one of the best selling cars in India.

Despite the Maruti 800's pullout from production, spare



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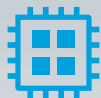
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## Lenovo buying Motorola

Google has decided to sell Motorola's handset division to Lenovo for \$2.91 billion  
<http://dgit.in/LenoMoto>



## Speedy Sandisk

Sandisk's new USB 3.0 pen drives provide write speeds up to 240MB/sec  
<http://dgit.in/MiuMB9>

parts of the car will be available to owners for the next 8-10 years.

## Talk to your feet through your shoes

Ducere Technologies – founded by Indian techies, Krispian Lawrence and Anirudh Sharma –



LECHAL – The Shoe

has announced the launch of LeChal (pronounced lay-ch-al, meaning “take me there” in Hindi). It claims to be the world's first interactive footwear with haptic feedback. The product is the first of many fashion segments that the company hopes to tap into. At the same time the product has its roots in a socially beneficial noble cause. Lechal was started as a project with a social aspect, which was to create an walking aid for the visually impaired. Each pair sold would result in a subsidised pair for blind people.

In the press conference held at Mumbai, CEO Krispian Lawrence unveiled two products, the first being an insole which can be slipped into any footwear to make it interactive and a shoe with the same technology incorporated in it. Let's look at the details of the two products.

### Insole

Launching on March 7, 2014, the insole has all the electronics located at the heel. All of these electronic components have been fitted into a small module which can be easily

removed. Each module has a weight threshold of 500 kg. The remaining portion of the insole can be replaced as and when they get worn out. The company hopes to keep the price of the insole below \$100 (₹6,213) while the replaceable portion can be obtained for ₹500, however, the

final price would be unveiled on the launch date.

### Shoe

The shoe has a flap near the rear cuff where the battery is slid in. The haptic feedback module might be located in the heel of the shoe. The shoe will be launched in the colours, red and black. The pricing of the shoes wasn't disclosed.

### Charger

Each module comes with a rechargeable battery that has reversible contacts. The charger has an in-built clapper which when activated beeps in a certain pattern to indicate the level of charge.

### App

The shoes work by communicating with the user's smartphone via Bluetooth. The phone must have a dedicated Android, iOS or Windows navigation app installed. While the user can interact via voice commands, to simplify things, most of the operations can be performed using the volume keys on your smartphone. The release date

for the app hasn't been revealed.

### Development time

The prototype first made the headlines back in mid 2011 when the primary focus was towards developing an aid for the visually disabled. The prototype was developed on Arduino but the company later migrated to AVR. When asked whether the API for the app would be released, Krispian responded saying that they would release the API after further development, but there would be restrictions placed on the developers.

### Future use

The prototype models are being tested out at the L.V. Prasad Eye Institute, Hyderabad where inputs from the visually impaired are being used towards further development. Ducere will start taking preorders on March 7.

## Can Google Glass end Cancer?

Google Glass was used by surgeons in a cancer surgery to summon patient records. Two

out the patient's records, including MRI and X-ray information on its display for the surgeons' reference, just out of the surgeons line of sight during the surgery.

The doctors have big plans for Google Glass and want to use the wearable technology to stream videos for educational purpose, giving students insights into different stages of surgery. Dr. Szotek also plans to use biological tracers that could help Google Glass tell apart tumours from healthy tissue.

Doctors suggest that this automatic differentiation “could revolutionise the field of cancer surgery” and will help in complete removal of cancerous tissue while still leaving as much healthy tissue behind as possible.

Google Glass is not the only wearable technology making inroads in the medical field. Researchers at Washington University recently demonstrated their own smart glasses system that was capable of identifying cancerous tissue.



Google Glass – the modern know-it-all nurse

physicians, Dr. Szotek and Dr. Jeff Browne, each sported Google Glass during a four-hour abdominal surgery and relied on Google's voice control to access medical information as they sliced out a tumour. Google Glass was able to pull

This eyewear could help surgeons remove tumours from patients with breast cancer or melanoma. The eyewear shows the wearer margins of tumours more accurately when a dye is used to fluoresce a tumour's borders.

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**Web watch**

Facebook is becoming politician friendly, eBay India starts new same day delivery service and more...

**App watch**

The best apps to watch out for this month will keep you entertained, updated and informed

# What's new in the mobile space?

There's certainly more to look forward to than a WhatsApp deal with Facebook. There's Ubuntu phones, aromatic SMSes, major launches, and not-so-minor updates. Read on for your monthly quick fix

## HTC One successor to be unveiled on March 25

HTC will officially unveil its new flagship smartphone – a successor to the current flagship HTC One – at an event in London on March 25. “The best is about to get better,” said HTC UK on Twitter along with a ‘Save the Date’ image.

Codenamed HTC M8, the HTC smartphone will be called either HTC One 2 or HTC One+.

The next HTC phone will have a 5-inch 1080p display, Snapdragon 800 chipset, 2GB RAM and twin UltraPixel cameras (resolution unknown but expected to be over 4MP) with dual LED flash.

The March 25 event indicates that HTC may keep a low profile at MWC 2014 in Barcelona, where many had thought that the company would give them a peek at its new flagship smartphone. Apparently, the company wants complete media attention when it announces the new flagship phone, rather than have the news buried among other announcements.

## Facebook acquires WhatsApp for \$19b

Facebook officially announced the acquisition of the massively popular mobile messenger WhatsApp in February for



HTC One 2/One+ coming soon

a total of approximately \$16 billion, including \$4 billion in cash and approximately \$12 billion worth of Facebook shares. The agreement also includes an additional \$3 billion in restricted stock units for WhatsApp's founders and employees that will be released in over four years subsequent to closing. Also, WhatsApp co-founder and CEO Jan Koum will join Facebook's Board of Directors.

The acquisition comes at a time when WhatsApp has already built a huge user base – 450 million monthly users worldwide. WhatsApp has

continued to see strong growth and is adding over 1 million new registered users per day. WhatsApp's messaging volume has already totalled the entire global telecom's SMS volume.

Mark Zuckerberg, Facebook founder and CEO said, “WhatsApp is on a path to connect 1 billion people. The services that reach that milestone are all incredibly valuable. I've known Jan for a long time and I'm excited to partner with him and his team to make the world more open and connected.”

Jan Koum, WhatsApp co-founder and CEO said, “WhatsApp's extremely high user engagement and rapid growth are driven by the simple, powerful and instantaneous messaging capabilities we provide. We're excited and honored to partner with Mark and Facebook as we continue to bring our product to more people around the world.”

The Facebook-WhatsApp deal is considered to be the biggest Internet deal since Time Warner Inc.'s \$124 billion merger with AOL Inc. in 2001.

Of late, Facebook had been facing stiff competition from mobile messaging apps such as WhatsApp, WeChat, Kakao Talk, Snapchat, Line, BBM and Viber. Recognising the threat, Facebook has eaten up the com-

petition and apparently become the leader in the mobile messaging space by this acquisition.

It will be interesting to see whether Facebook will bring ads to the mobile messaging app, as the social networking giant has been looking to make money from the mobile platform. However, WhatsApp co-founder and CEO Jan Koum has been against advertisements.

WhatsApp in a blog post said: “WhatsApp will remain autonomous and operate independently. You can continue to enjoy the service for a nominal fee. You can continue to use WhatsApp no matter where in the world you are, or what smartphone you're using. And you can still count on absolutely no ads interrupting your communication. There would have been no partnership between our two companies if we had to compromise on the core principles that will always define our company, our vision and our product.”

## The world's slimmest smartphone

Gionee has announced the world's slimmest smartphone, the Elife S5.5, which is only 5.5mm thick. The Elife S5.5 beats all records as it is slimmer than the 5.75mm thick Vivo X3 smartphone and the 5.8mm



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Best Indian Peripheral  
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## Security watch

Check out the repercussions of a fake Flappy Bird app doing the rounds and more such stories

## 10 on 10 for FB

Here are 10 ingenious hacks that helped Facebook take over the Internet over the course of its ten years in existence: <http://dgit.in/fb1010h>

thick Wham Wiry W1. The smartphone will be powered by a 1.7GHz quad core CPU with 2 GB of RAM. It will run on Android 4.2 with Amigo UI on top. The smartphone also features a 5-inch display (resolution not disclosed), a 13MP rear camera and a 5MP front camera. The best part about the phone is that despite being slim, Gionee has still managed to cram in a 2300mAh battery, which it claims will last a whole day.

The 3G model of Elife S5.5 is up for pre-order in China and is priced around \$370 which is roughly about ₹23,000. According to sources, Gionee will also be launching a 4G version of the Elife S5.5.

Recently Gionee launched the Gpad G4 and Gionee M2 smartphones in India priced at ₹18,999 and ₹10,999 respectively.

## First Ubuntu smartphones to ship in 2014

Canonical has announced that it will launch its first Ubuntu-based smartphones this year. The smartphones will be made by BQ, a Spanish manufacturer of multimedia devices and Meizu, a Chinese smartphone manufacturer. The phones will be available on the websites of the respective manufacturers and at Ubuntu.com.

Canonical founder, Mark Shuttleworth, speaking in a web conference, said that the firm was also working with some well-known brands. However, he also stressed that the two chosen companies were selected in order to bring out the devices into the market quickly.

The company is also expected to reveal a few tablets carrying Ubuntu Touch, the mobile version of the Ubuntu OS developed by Canonical UK Ltd. and the Ubuntu commu-



The Ubuntu phones will be available this year

nity primarily for touchscreen mobile devices.

At the time of writing, Canonical hadn't revealed the specifications of the devices but said that it would unveil the Ubuntu-based smartphones and tablets at Mobile World Congress (MWC) in Barcelona to be held between February 24-27, 2014. Shuttleworth hinted that the BQ device would be a dual-SIM phone and the Meizu manufactured phone would run on a hardware that the company has already used in its previous phones.

According to Shuttleworth, Canonical is trying to reveal Ubuntu as an alternative platform to Android. "We don't see BlackBerry and Windows Phone as direct competitors. The people who want to use those platforms are not going to choose Ubuntu, but those interested in Android may consider it. The position that we seek is to be a credible alternative to Android at scale for particular audiences," he said.

## S4 users rejoice!

Samsung has started rolling out the Android v4.4.2 KitKat update to its Galaxy S4 smartphone. According to reports, the Exynos-based Galaxy S4 (GT-I9500) will be the first to receive the update, while the

Snapdragon 600-based I9505 version will follow shortly after.

The latest Android updates bring a slew of new features including minor UI changes, performance boost and better lock screen. The update also brings support for full-screen music album art and a dedicated camera shortcut.

The new UI shows KitKat style white status bar icons instead of the multi-colour icons, which we've seen on other Samsung devices. The keyboard layout has also been improved

## Send texts with fragrances

A Harvard University researcher and his team have created an 'oChip' that can send thousands of unique fragrances via phone calls, texts or social media messages. The chip works in collaboration with a phone called 'oPhone'.

It is the brainchild of Harvard Professor David Edwards and two of his design students, Rachel Field and Amy Yin, who have established Vapor Communications, an organisation operating out of Le Laboratoire (Le Lab) in Paris to bring the device to market.

David Edwards also teamed up with French designers Baptiste Viala and Laurent Mion to produce a working prototype. It was recently displayed at the arts and design center Le Laboratoire in Paris.


Edwards believes oPhone can send complex odors to people and may even help Alzheimer's patients recover old memories.



Soon you'll be able to send fragrances via smartphones

for use in landscape mode. This is supposed to make gesture typing easier and faster. Other notable features include wireless printing, support for new emojis, Hangouts for SMS/MMS, option to customise launchers under settings and more.

The scents can be shared via smartphone attachments and Bluetooth devices to other oPhones across the country, states or ocean.

The gadget is scheduled for a Beta release at the year end before a major release in 2015. 

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### Suvidhaa's revolution

Suvidhaa announced a new consumer platform which may just revolutionise the method of online payments in India: <http://dgit.in/suvrev>



### \$18.8m to Truecaller

Truecaller received support to build the world's largest verified mobile phone community: <http://dgit.in/MkLu2G>

# The evolution of the web

From Facebook influencing vote banks to the usual suspects introducing a whole bunch of updates, the online landscape keeps getting more interesting by the day

## The country's top politicians answer your policy and issue-based questions on Facebook

With Lok Sabha polls just around the corner, Facebook has launched a new platform – Facebook Talks Live – where you can ask the country's top politicians Narendra Modi, Mamata Banerjee, Lalu Yadav, Akhilesh Yadav and Arvind Kejriwal, among others, about their electoral agendas.

The social media giant teamed up with NewsLaundry and NDTV to launch the platform, scheduled to go live on March 03. Facebook users were invited to put up their questions on <https://www.facebook.com/FacebookIndia> on February 20, 2014.

Journalist and Editor-in-Chief of newsLaundry.com, Madhu Trehan is moderating the one-hour sessions which will see politicians address these questions on FB Talks Live. This will be telecast Live on NDTV and livestreamed on <https://talks.facebooklive.com/>.

BJP's prime ministerial candidate Narendra Modi will be the first politician to appear on the platform on March 03.

The election special announcement on Facebook's official India page attracted over 14,000 likes and more than 1,300 responses and questions.

A study by IRIS Knowledge Foundation, released last year, found that 150 constituencies



Ask them your questions

across India could come under the impact of the Facebook vote.

## LinkedIn reaches 50 million users milestone in Asia

Since LinkedIn opened its regional center in Singapore in May 2011, it has crossed the 50 million users mark in Asia-Pacific – tripling its user base in less than three years,

According to a report, nine countries in Asia-Pacific have more than a million LinkedIn

increased by more than 50 per cent to reach over nine million, with more than seven million new members from India alone. LinkedIn sees huge potential in its Asian user base and expects the numbers to further grow.

The top-most industries represented on the social media network include IT and Services, Telecom, Oil & Energy, Banking & Financial Services and Hospitality. In India, the top industries represented include IT and Services, Financial Services, Telecom, Computer Software and Pharmaceuticals.

Managing Director, Asia Pacific and Japan at LinkedIn, Hari V Krishnan said, "Our members represent a broad cross-section of industries across the Asia Pacific region ...As the region increasingly consolidates its position as a key driver in the global economy, our aim is to help professionals

LinkedIn Contacts. Recruiters are also seeing better smart-phone tools from the company. Mobile represents nearly 41 per cent of all traffic to LinkedIn and more than 30 per cent of posted jobs on LinkedIn are viewed on this platform.

Krishnan further said, "The strong growth we are seeing in our member base is a great encouragement for us. We are looking to introduce more features to deliver even more value to our members and customers. Asia is a growth story. Whether it's expanding professional connections, tapping critical talent or marketing and selling to this influential audience, we're excited to be able to help connect the dots and create economic opportunities for everyone."

## Google Doodle celebrates Sarojini Naidu's 135th birth anniversary

Google Doodle commemorated noted freedom fighter and poet, Sarojini Naidu's 135<sup>th</sup> birth anniversary on February 13. Naidu's portrait was placed on the second 'O' of Google's official logo. Google also replaced its letter 'L' with a pen to indicate Naidu's writing prowess.

Sarojini Naidu was a child prodigy, poet and Indian independence activist. She was born in Hyderabad on February 13, 1879. She joined the Indian National Movement in 1905. During 1915-1918, she travelled across India delivering lectures on social welfare, women's



members each, including India with 24 million users; Australia with five million; China about five million; Indonesia and the Philippines over two million each; and Japan, Malaysia, Singapore and New Zealand having more than one million users each.

Last year, the user base in the Southeast Asia region

and businesses here become even more successful at what they do."

He added that mobile leads the way and the company is now focusing on improving its mobile offerings. Currently, LinkedIn has three apps for consumers: the core app for mobile devices, a professional news app called LinkedIn Pulse and



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**ROCCAT Kave XTD**

ROCCAT announced the availability of the Kave XTD 5.1 digital gaming headset in Europe and North America: <http://dgit.in/rkavextd>

**The nation wants to merit**

Meritnation.com's mobile app offers study materials, tests and revision modules for students from Classes 6 to 12. Available on Android and iOS



Doodle celebrated Sarojini Naidu's 135<sup>th</sup> birthday

empowerment and nationalism. Sarojini Naidu helped to establish the Women's Indian Association (WIA) in 1917.

In 1905, Naidu eulogised India in her poems published in three collections, *The Golden Threshold* (1905), *The Bird of Time* (1912) and *The Broken Wing* (1917). Her poems were so appreciated that Naidu was bestowed with the sobriquet '*bulbule hind*' (The Nightingale of India).

She was one of the framers of the Indian Constitution, the first woman to become the governor of an Indian state and the first Indian woman to become the president of the Indian National Congress in 1925. Naidu was awarded the Kaiser-i-Hind medal by the British Government for her work during the plague epidemic in India. Naidu died of a heart attack in 1949.

Of late, India-specific doodles have been cropping up on the search engine's website. Last year, Google posted doodles celebrating noted Indian Physicist CV Raman's birthday, Indian Independence Day, Children's Day, Poet Jagjit Singh, Filmmaker Satyajit Ray and 'human computer' Shakuntala Devi, among others. The previous doodle marked India's 65<sup>th</sup> Republic Day on January 26, 2014. The doodle showed stuntmen motorcyclists, representing Indian armed forces, carrying

the doodle which was painted in the colours of the Indian national flag.

### eBay India starts '9 hour delivery' service in Mumbai

eCommerce marketplace eBay India kicked off its '9 Hour Delivery' service on January 15 in Mumbai covering popular lifestyle and technology products including laptops, mobiles, perfumes, jewellery and much more.

The 9 Hour Delivery service is targetted at shoppers who want their favourite products delivered as soon as possible. eBay has tied up with the Mumbai Dabbawala Association and Meru Cabs to generate awareness about the service.

The Mumbai Dabbawalas wore eBay India T-Shirts and distributed leaflets along with their lunchbox deliveries giving details about the new service. Meru Cabs provided free cab



rides from 12 noon to 9 pm to passengers across select locations in the city including the Kalaghoda Festival on February 9. Additionally, live contests were held across radio and eBay's Twitter and Facebook accounts to promote the initiative. The

entire on-ground engagement programme took place between February 7-11, 2014.

Commenting on the campaign, eCommerce Evangelist, eBay India, Deepa Thomas said, "This campaign is a part of our endeavor to not only spread awareness about the '9 Hour Delivery' service recently launched in Mumbai but also to encourage more people to shop online. With this ground activation we will be covering key pockets of South Mumbai and Western Suburbs to engage consumers."

In December 2013, Amazon and Flipkart launched similar services with assured same-day delivery for consumers. The key difference being that

timeline with its most significant milestones.

The company also released a video comprising user shared images from over the years. Flickr boasted in a blog post that it was the first "significant" online community for storing, tagging, organising and sharing digital photos. "Before Flickr, there was no widespread way to share your photos with friends, family and the wider public," the company wrote.

Co-Founder Stewart Butterfield said in a statement: "It's exciting for me to celebrate Flickr's birthday! When we dreamed this photo site 10 years ago, we couldn't have imagined the impact it



Amazon is providing the service in several cities in India including Mumbai, New Delhi, Bangalore, Ahmedabad, Pune and Hyderabad at an additional charge of ₹99. Only days later, Flipkart followed suit and announced that it was offering its 'In-a-day' delivery service across select cities including Mumbai, Delhi, Noida, Chennai, Pune, Bangalore and Hyderabad at an additional charge of ₹90 per product. At eBay India, however, there are no convenience charges.

### Flickr celebrates 10 years

Photo sharing site Flickr turned 10 on February 10. Boasting more than two million users, who share more than a million pictures every day, Flickr celebrated by sharing a

would have on digital photo sharing and the way it would connect people worldwide. I am proud of Flickr and excited for what's ahead."

Flickr celebrated its anniversary with contests and events around the world. The site invited users to send in 10 of their favorite pictures of the last 10 years in the #Flickr10 group. Select photos would be shared on its Facebook and Twitter channels.

Flickr rolled out a major site redesign and increased its free storage limit to 1TB in May 2013 under CEO Marissa Mayer. The company is now focusing on apps, with a new version to be released for Android and updates for iOS. The site faces stiff competition from Photobucket, Shutterfly, Snapfish, and others.

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**Pop-up dictionary for Android**

An app called WordLookup gives you an easy way to search for the definitions of words you're reading in many Android apps. Download it from: <http://dgit.in/wrdlkup>

**Need bite-sized news?**

Circa is a great app that summarises breaking news to keep you updated: <http://dgit.in/dlcirca>

# Planet of the Apps

Some of the best apps to watch out for this month will keep you entertained, informed and updated

Team Digit

[readersletters@thinkdigit.com](mailto:readersletters@thinkdigit.com)

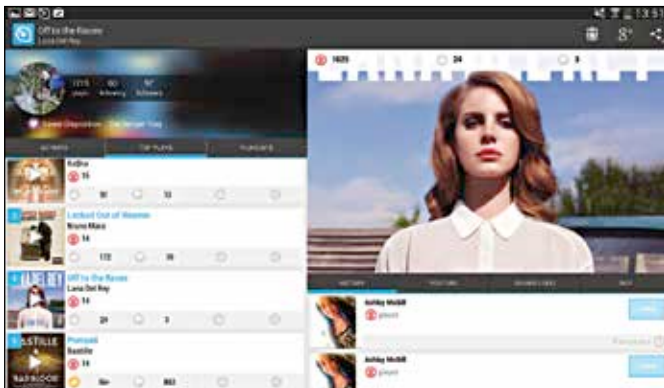
**Soundwave**

**Available on:** iOS, Android

**Price:** Free

Soundwave is sort of like Facebook for music lovers, in that the app offers a newsfeed entirely composed of what people you're following are listening to. The app has a clear focus on what its users are listening to and doesn't have too many extraneous features, which is really refreshing.

When you first begin using the app, you must sign in using either a new log-in or your Facebook or Google+ account. Once that's done, you can 'connect' the app to the music players that you use on your phone.



Apart from the default music player, you can also connect Soundwave to YouTube, Spotify, Rdio, 8tracks and Deezer. Doing so will ensure that every time you listen to a song through any of the above sources, it will be added to your Soundwave feed.

When you spot a song that you like on your feed, you can

share it on Facebook, Google+ or your own Soundwave feed. You can also add the song to custom playlists that you can create within the app. Every song also gets its own little page in Soundwave where you can listen to a sample on iTunes (before buying it), or listen to the entire song on YouTube or SoundCloud, if it's available there.

We noticed an issue with Soundwave on the iPhone. The app seems to have intermittent connectivity issues even though the phone is connected to a valid Wi-Fi network. As a result, some songs don't get synced to your feed.

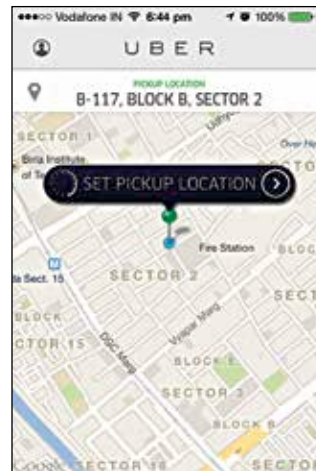
Overall though, Soundwave is an app worth checking out, wrinkles and all.

**Uber**

**Available on:** iOS, Android

**Price:** Free

Tired of the dirty, smelly cabs that most taxi services often send your way? Want your cab to have some semblance of class and are willing to pay a little bit extra for it? Well then, if you happen to live in



Delhi, Hyderabad, Bangalore or Chennai, you should try out Uber. While not technically a taxi service, Uber does provide access to a fleet of cars that include the Mercedes E-Class, BMW 3-Series, Audi A4, Toyota Camry and Honda Civic.

When you start the Uber app the first time, it requires you to sign up and then register a valid credit card (the only way you can pay for the ride). Once all that's done, the app opens up to an exceedingly simple interface – housing just a map and your location determined through GPS. Tapping on the small bubble above the app lets you confirm your pick-up address, and then all you need to do is tap the 'Request' button. Apart from asking for a pick up, the app also lets you edit your profile and payment information, but that's about it.

We recommend the Uber app because it provides access to an excellent service and as an app is simple without actu-

ally cutting down on any necessary features.

**The Football App**

**Available on:** Android, iOS, Windows Phone, BlackBerry

**Price:** Free

Are you a real footy fan? Do you live and breathe football? Do you want to know the latest happenings in the world of football? If so, then 'The Football App' is tailor-made for you.

Its key features include Live Feeds which keep you up to date with latest happenings such as the most recent football news, transfer rumours, fixtures, results, live scores, etc. Push notifications mean that you'll never miss out on any of the action.

You can also follow multiple teams from all major European leagues and any game with a live match page – featuring line-ups, stats and more. You can also easily share the latest football news via Facebook,



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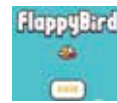
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## Top 10 Apple gags

Over the years, *The Simpsons* and *Futurama* have made more than a few jokes about Apple. Wired compiled a list of the best ones here: <http://dgit.in/aplgags>



## Flappybird dead? No chance!

Removing the notorious game from app stores is actually peaking user interest in trying to get it in any way they can: <http://dgit.in/1n6IB9D>

Twitter or email. The app also offers Team centric feeds so you have all the news of your favourite team in one place. The intuitive UI of the app looks neat and nicely laid out.

## SoundCloud

**Available on:** iOS, Android

**Price:** Free

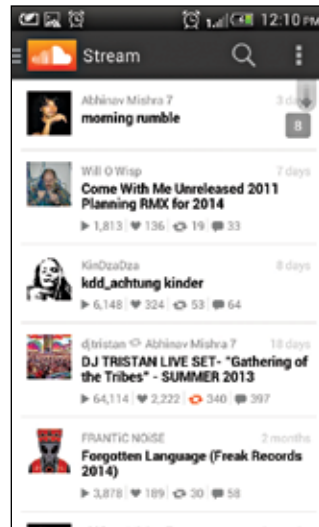
SoundCloud allows its users to share and listen to music. It's a great platform where budding artists, DJs and musical enthusiasts record, upload and share their own music with others. It allows for a hassle-free way to receive and share files.

The SoundCloud service was created in 2007 to be a sound sharing platform. Over the years, the service has brought about a complete transition in the way audio files are being received, transferred and distributed. It's an extremely useful service for music producers and consumers alike, and the app only continues to grow in popularity. The sound platform acts as a networking tool connecting the music community socially and professionally. SoundCloud provides the most simple way of sharing and receiving music and sounds. Moreover, it's a legal file sharing and receiving music application, eliminating the need to send files through email or other channels.

Users can check out the number of their followers and the number of times a particular track is played, track file downloads and perform an array of other actions that makes SoundCloud so popular.

Users can register via the SoundCloud application for free, though there's a premium account which offers additional features.

If you were a musician, and wanted to make your mark



in the music scene of your favourite genre, SoundCloud would help you generate a fan base, connect with people socially and receive feedback from listeners.

## Circa

**Available on:** iOS, Android

**Price:** Free

Circa is a news reader that aims to redesign how mobile users read and interact with news.

The most important feature that differentiates Circa from other news readers is that its writers (yes, it has its own writers) break news into essential, easy-to-digest nuggets of information (facts, quotes, photos and maps) for quick reading; instead of taking articles directly from the Web and reformatting

them for mobile devices. These writers take selected stories in their original form and write them as single-screen briefs. Circa was voted as one of the best news apps in 2013 by both Google and Apple.

The app gives you updates of only those stories in which you're interested. All you have to do is click on the 'follow' button at the top. As the story develops, Circa will notify you about the update via push notifications and all you need to do to start reading it is just tap it.

You can share stories and points that you find interesting via apps, email, messaging, or Facebook and Twitter.

If you like reading news in a quick and easy way with a hassle-free interface, then you must try Circa. Once you've installed it, you'll realise how simple being up to date with news can be. And if you need more convincing, did we mention that Circa's writers are professional journalists?

## Kayak

**Available on:** iOS, Android, Windows Phone

**Price:** Free

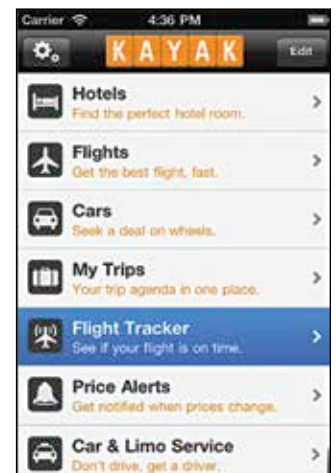
If you're a frequent traveller, you'll find all the answers to your travel needs in the Kayak app.

Centralising search to give you the best rates on flights and hotels, Kayak makes trav-

elling extremely easy. It works as a travel search company (and not a travel agency). After you enter airport locations, you'll see a list of flights which can be sorted by price, number of stops, flight duration and flight timings.

In addition to flight searches, the app has features like flight tracker (to check if your flight is on time) and price alerts (which notifies you of any price changes for your desired flight).

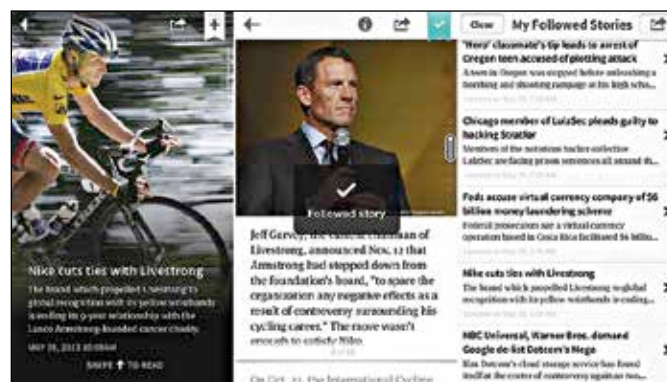
The app also features 'My Trips' - useful for long-term



travel planning. Once you create a new trip agenda, you can later add 'events' to the trip such as flight, train, bus or car travel, hotel booking, concert or meeting; or you can create a custom event. It also gives you directions from a 'start address' to an 'end address.' The app has a handy currency converter. It also gives you the option of organising your travel plan by creating a packing list.

The app has become feature rich over the last couple of months and Kayak is now considered as the new standard in travel booking apps.

The Pro version of the app available on iOS and Kindle Fire is ad-free. [4](#)



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## Snowden's simple tool

Edward Snowden used a common web crawler program to nick sensitive NSA documents, raising more concerns about the agency's security



## Tesla hires a hacker

In a move to better secure their vehicles the motor company hired a hacker previously employed by Apple <http://dgit.in/TeslaHacker>

# On the qui vive

We take a look at some of the important developments in the security segment over the past month

Kul Bhushan

[readersletters@thinkdigit.com](mailto:readersletters@thinkdigit.com)

Should India be wary of doing business with Chinese firms such as Huawei and ZTE? A new round of debate has been triggered post the Indian Government announcement that a probe has been ordered into the alleged involvement of Huawei in hacking state-owned BSNL's network.

The government was informed about an October 2013 incident of unauthorised access to BSNL's mobile towers in the coastal areas of Andhra Pradesh. It was believed that

probe team will investigate into the alleged hacking and give recommendations on how to prevent such incidents.

The investigation team will also look into the possibility of the incident being due to inter-corporate rivalry between Huawei and ZTE, which bagged BSNL's network expansion tender of about 10.15 million lines in 2012.

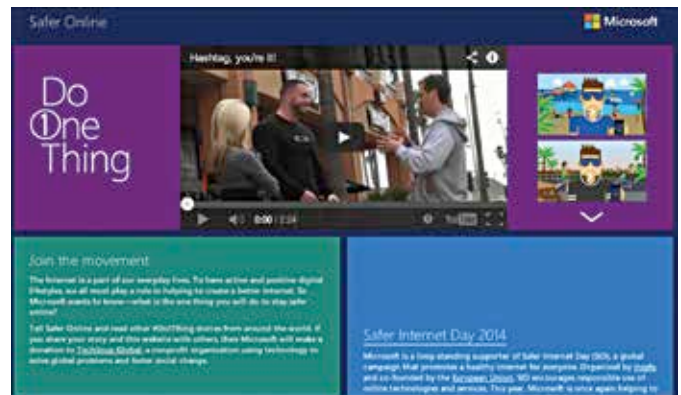
Almost two years ago, a Parliamentary panel had warned the Indian government about increasing supply of hardware and software equipment by Chinese companies to the Indian firms. The panel had warned the government to consider USA's warning on dealing with Chinese firms.

The US government in a report had claimed that Huawei and ZTE pose a national security risk and recommended that the US firms shouldn't conduct business with the Chinese telecom giants. Chinese companies Huawei and ZTE responded by strongly denying allegations of cyber espionage threats.

## India-Pak cyberwar continues

Indian hackers broke into over 100 Pakistani websites after Pakistani hackers defaced over 2,000 Indian websites on Republic Day.

The Pakistani websites that were hacked showed the message "Hacked by Indian Cyber Rakshak". The retaliatory defacement of Pakistani websites began on January



Microsoft's attempt to make the Internet a safer place

28 and continued through January 29, add reports. On January 26, Pakistani hackers had defaced about 2,118 Indian sites including websites of the Central Bank of India and Bollywood actress Poonam Pandey.

Most of the Indian sites were defaced by Pakistani hackers using handles such as "Striker-Rude", "KashmirCyberArmy", "PakCyber Expert", "HUNter Gujar" while the Operation was named as "#OP26jan".

## Microsoft, Google, Twitter mark Safer Internet Day

Internet companies Microsoft, Google and Twitter marked Safer Internet Day celebrated on February 11, 2014 with privacy awareness campaigns.

In honour of the day, Microsoft launched an interactive website at <http://www.microsoft.com/saferonline> that provides easy tips to less tech-savvy Internet users.

The 'Do 1 Thing' campaign on the website aims to make

people aware about basic safe Internet practices. It involves educating people on the importance of adding a lockscreen password to devices, enabling automatic Windows updates and being careful when using unprotected Wi-Fi.

Google India showed its support by introducing its 'Good to Know' campaign in India to raise awareness around staying safe online. Like Microsoft, Google also launched a website at <http://dgit.in/ML5SRj>. For this campaign, the search giant tied up with the Digital Empowerment Foundation (DEF) and the Voluntary Organization in the Interest of Consumer Education (VOICE). The initiative includes a series of online safety workshops that will reach schools, NGOs, consumers and industry groups across India.

Good to Know is endorsed by the Computer Emergency Response Team (CERT-In), the Government of India's nodal agency that deals with cyber security threats; the Data Secu-



Who hacked BSNL's mobile towers?

this hacking was carried out by the engineers of Huawei.

The investigation team comprises top officials from the National Security Council Secretariat, Intelligence Bureau, Union Home Ministry and BSNL. The

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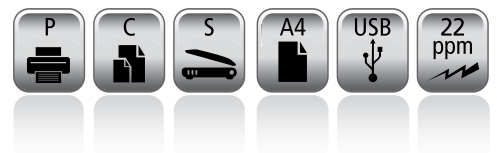
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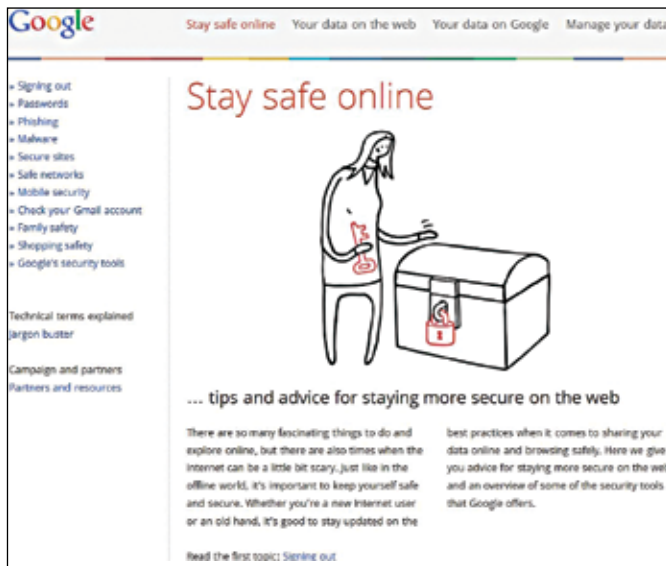
## Another blow to PC sales

Sony recently made an announcement that it was selling out its entire Vaio division to Japan Industrial Partners <http://dgit.in/NoVaio>



## Yahoo ups its game

The portal is partnering with Yelp (the reviews website) to augment its local search functionality. Will this move let the company stay relevant?



Google India's 'Good to Know' campaign on its website

rity Council of India (DSOI) and the Internet & Mobile Association of India (IAMAI).

DEF and VOICE kicked off the Good to Know campaign, with a week-long series of educational events in New Delhi, followed by digital literacy and online safety workshops in Pune, Kanpur, Guwahati and Lucknow. VOICE will focus especially on outreach to schools and NGOs across the country, teaching tips and tricks to help families become responsible digital citizens.

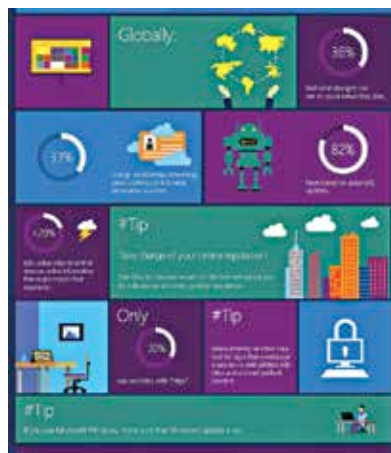
Twitter is indirectly targeting users by helping anti-bullying non-profit organisations, who can avail of free advertising services on the social media giant's platform.

## 20% of Indians are victims of phishing attacks: Microsoft survey

Microsoft's third annual Microsoft Computing Safer Index (MCSI) report has outlined that the online safety procedures followed by Indians is quite poor. As a result,

nearly 20 per cent of internet users in India are victims of malicious attacks.

Microsoft released the report on February 11, marked as International Safer Internet Day. According to the MCSI survey, the annual worldwide impact of identify thefts and phishing could be as high as \$5 billion. The cost of repairing online reputation is far higher at around \$6 billion, or an estimated average of \$632 per loss. Microsoft reported that 20 per cent of Indians claimed to be victims of phishing while 12 per cent claimed to be victims of online identity theft at an average cost



Microsoft urges you to stay safe online

of ₹7,500. The MCSI survey, conducted between March and May 2013 asking consumers to share their online experiences for the last 12 months, measured the online safety behaviour of almost 10,500 consumers in 20 countries including Australia, China, India, Indonesia, Russia, Singapore, the UK, and US among others.

Globally, only 34 per cent of users said that they limited the amount of personal information for strangers to see on social networks. While 38 per cent said they adjusted their social network privacy settings, only 35 per cent used a PIN (personal identification number) or password to lock their mobile devices.



Don't let Flappy Bird fool ya

## Fake 'Flappy Bird' app sends text messages to premium number

A fake *Flappy Bird* app has been spotted on Google's Android Play store that tricks users into sending premium messages and increases their mobile bills.

According to Trend Micro, the malicious app asks for the additional read/send text messages permissions during installation – permission not required in the original version.

Trend Micro added that all of the fake versions of *Flappy Bird* have so far been premium service abusers, that is apps that send messages to pre-


mium numbers, thus causing unwanted charges to victims' phone billing statements. Apart from premium service abuse, the app also poses a risk of information leakage for the user since it sends out the phone number, carrier and Gmail address registered in the device.

The original *Flappy Bird* was officially taken down from the mobile app stores on February 9 by its creator, Dong Nguyen possibly due to the massive surge in media attention over the game.

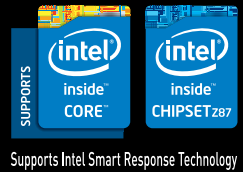
## 'Uncrackable' geographical passwords coming soon

Computer scientist Ziyad Al-Salloum of ZSS-Research in Ras Al Khaimah, UAE, has developed 'geographical passwords' for securing online data. The new 'geo' approach works on your ability to recall a favourite or visited place with relative ease, and then use that place's specific location as the access credentials.

The prototype system was developed by ZSS-Research to protect a system against known password threats. The developer says that conventional passwords are a security risk in the face of increasingly sophisticated "hacker" tools that can break into servers and apply brute force methods to reveal passwords.

The geographical password system utilises geographical information from a specific memorable location around which the user has logged a drawn boundary – hence longitude, latitude, altitude and other features form the geographical password. It could be your favourite holiday destination, your local park or any other geographical feature. 

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### The Honda files

The motor giant has released 3D print files for some of its concept cars.  
<http://dgit.in/Honda3D>



### TPB block lifted

Netherlands court declares blocks to be ineffective, hence, removed  
<http://dgit.in/TPBFree>



## RAZER Nabu

Part smartwatch, part fitness band, the RAZER Nabu tries to outperform all the wearable gadgets that are vying for your wrist space. Think of it as an amalgamation of Nike Fuelband, Samsung Galaxy Gear and the Pebble all rolled into one – minus the giant clock face, of course. It has dual OLED displays, with the larger one seating on the inside of your wrist. Its built-in accelerometer can track your vitals (just like the Nike Fuelband), pairing it with an iPhone or Android device lets you receive notifications (and more), and it also supports unique gestures. You can train the Nabu to dismiss calls by shaking your wrist or snapping your fingers. You can even exchange info with other Nabu users (similar to how NFC works) by high-fiving people or some similar gesture. The Nabu's slated to release soon, so stay tuned.

# Drool-worthy products from the future are here!

## Shure SE846

If it's noise isolating headphones you desire, look no further than the Shure SE846. Sporting detachable cables and customizable frequency response, the SE846 has quad high-definition microdrivers with true subwoofer for what should produce high-end clarity. The headphone's sound isolating capabilities claim to block out up to 37 dB of active ambient noise effectively. It has durable kevlar reinforced cables and a 360-degree custom ergonomic fit in the ear. Besides a ton of tech that we just don't have space to include here, the Shure SE846 is definitely a looker with its crystal clear transparent design. Want one? Get one.





### Media Centre <\$500

Here's a lifehacker article about a DIY Media Centre under \$500  
<http://dgit.in/mcomd>



### Swallowable PillCam approved

FDA has finally given a go-ahead for a Pill that has a camera inside it for use during medical procedures.  
<http://dgit.in/PillCamHo>

Drool maal



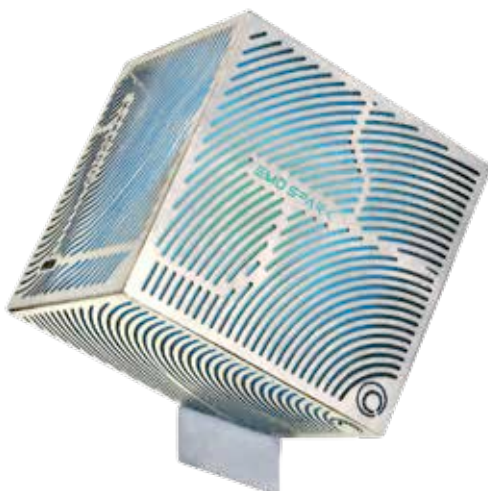
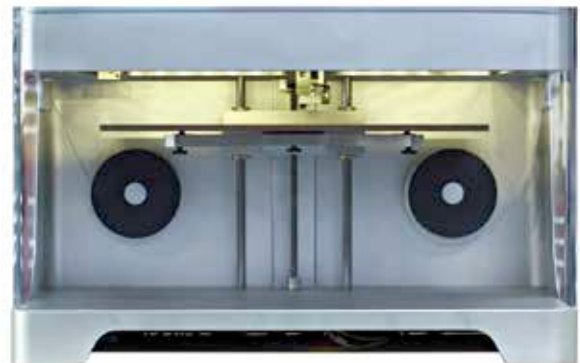
## Trusco Toolbox

If there's one thing we know from experience about Japanese technology and craftsmanship is to never doubt their ingenuity and try not to let that jaw drop in astonishment too many times. Just think about it – How can a toolbox be any different from others that house tools in them? Well, if it has a double-hinged lid like the one on Trusco's with a slick design, it sure is a head-turner, don't you think? It has a stamped steel exterior with a premium blue enamel finish that catches your eye immediately. There's double-sided doors that open effortlessly and customizable compartments to make it a true penthouse for your tools. This is something that you don't hide in your garage, but show-off in the middle of your living room, it's that good looking.

## Mark One

We're at that stage in technological evolution where 3D printers are a dime a dozen, and the entire segment is a hotbed of innovation. But moving beyond plastic or even metal, the Mark One's claim to fame is its ability to 3D print objects in carbon fibre. And it's no simple feat! The

Mark One prints in continuous strands, using a unique print head to print parts that are 20 times stiffer and 5 times stronger than the ABS plastic used in most 3D printers. Not just carbon fibre, the 3D printer can create objects out of fibreglass, nylon and the standard PLA plastic seen in most printers.



## EmoSpark

This smart Android cube something right out of the AI-driven movie, Her – a must watch. From science fiction to science fact, the EmoSpark tries to take mainstream consumer-interfacing AI to a whole new level with this small device. It can detect your face and learn to gauge your emotions (joy, sadness, trust, disgust, fear, anger, surprise and anticipation) through your facial expressions. At the beginning of your relationship with the cube, EmoSpark can do the basics like pull up content from YouTube, suggest friend activity on Facebook, etc. But as the ties go deeper, and depending on your reactions to its suggestions, the bond grows and it has over 39 million topics to opine on (courtesy Freebase). Your AI companion from the future is here!



## Space age

Join humanity's age-long quest to figure it all out – one particle of exotic matter at a time.

## Speaker for the dead

Facebook has given a father full access to his dead son's social media page and its contents. Does this raise privacy concerns?



NASA's Cold Atom Lab Logo

# On the edge

Exploring our fascination with the extreme

Cyril Vatteli  
readersletters@thinkdigit.com

**T**ime and time again we are reminded of the limits of our universe and turn our backs to it, only to have one enterprising research institute pat our shoulder and ask us to see what lies beyond. Every new limit keeps getting overwritten by a new one, and impossible seems to be a statement you would not want to make in public lest you be made a fool of in a short

period of time. This is good. This is exactly how it should be.

## The Coldest

The coldest spot on the earth right now is a ridge in the Antarctic where the temperature can dip to 92 degrees Celsius. The coldest spot in the universe is the Boomerang Nebula at -272 degrees Celsius or 1K, a cloud of gas released out by a dying star around 5,000 light-years away. NASA researchers spit on such ridges and Nebula's and intend to create the coldest

spot in the Universe at 100 picoKelvin, or one ten billionth of a Kelvin. And that too inside the International Space Station.

In what has been imaginatively called (cold?) the Cold Atom Lab, was put together to provide scientists with a doorway into the world of quantum mechanics. As temperatures start plummeting to near zero Kelvin, or Absolute Zero, strange things start happening. Molecules don't react the way they normally do, two atoms may combine to result in no atom at all – a world of probability and far-fetched science-fiction films is on the horizon and scientists are all too keen on finding out what happens there. And if what they believe is correct, we may be able to see quantum wave packages as wide as a human hair.

But why on earth will this be on a space-ship? Well consider a spray can. It cools when used because the gas inside the can leaves, the remaining gas expands to fill in that space and as a rule of thermodynamics, gases cool when they expand. To create the coldest spot, researchers have to use a more sophisticated instrument mirroring our humble spray can called 'magnetic traps'. In the



## First prosthetic that can feel

Researchers have developed a prosthetic that can provide a form of feedback to the wearer based on touch <http://dgit.in/FeelHand>

absence of gravity, these traps can be made weaker, allowing the gases to expand and cool more than it would have under the influence of gravity.

## The Blackest

The blackest black right now is debatably, a black hole. It sucks all light and obviously reflects none, but even that is debatable. In 2008, scientists contributed to this world the blackest man-made object yet – the VACNT.

By aligning carbon nanotubes vertically in a brush-like formation, Rennselaer Polytechnic Institute created an object which absorbs 99.97% of all light. A light photon which does not get absorbed by one nanotube gets deflected and absorbed by another, a process which repeats until the light is completely absorbed by what the researchers have called the 'forest'. Due to its nature, The VACNT with the naked eye will appear perfectly flat when in fact it is a sheet full of deep holes.

Considering that conventional black coatings or graphite generally reflect about 5% of light, 99.97% absorption is pretty neat. Especially when even NASA was not able to beat it, creating a substance which absorbs only what is now a laughable 99.5%. According to fastcompany.com though, NASA, in collaboration with Melbourne Center for Nanofabrication, have recently worked on a project to create something even blacker.

The burning question is of course why? What need do we have for this abomination? Well since it absorbs almost all light, it would be a very useful in energy converters and a well as in stealth and defence as it could serve as a brilliant cover. Splinter Cell would get a bit easier, among other things.

## The Lightest

Okay so here is a category which gets reshuffled very regularly. A type of Aerogel or "frozen smoke" with a density of 4 mg/cm<sup>3</sup> came into prominence for being the lightest material in the world in 2008. In 2011, good old frozen smoke lost its title to a micro-lattice material with a density of 0.9 mg/cm<sup>3</sup>. Aerographite soon followed with a density of 0.18 mg/cm<sup>3</sup>.

The current titleholder, beating the previous contestant by a sweet 11% in weight, is the Graphene Aerogel, created by researchers at Zheijang University in China, with a density of 0.16 mg/cm<sup>3</sup>. Created with the magical material Graphene, the researchers have claimed that if our entire body was made up of this material, we would weigh only around 0.01kg.

The lightest man-made material in the world (for now) was created by taking a semi-solid gel of carbon nanotubes and graphene and then freeze-drying it to convert it to a sponge-like material which can be adjusted into whatever shape desired. This process, the researchers said, is actually one of the easiest method in producing a light material, thus kicking the behinds of previous materials in more than one possible area.

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## 10 million reasons

As malicious Android apps hitting 10 Million, Kaspersky has some advice for Android users to protect against malignant cyber-scammers <http://dgit.in/maland>

## Alt+Tabbing troubles

If you've always wondered why using Alt+Tab combination while you're playing a game in fullscreen mode, freezes or slows down your PC. Read this: <http://dgit.in/AltTabbing>



Graphene Aerogel on a plant spine

Apart from comfortably sitting atop flowers, Graphene Aerogel has been stated as having very high oil absorption capabilities, and so could be a natural remedy for an oil spill. Additionally, the researchers have claimed that it is recyclable too.

## The Heaviest

For years and year researchers have tried to prove the existence of element 118, the heaviest element known to man temporarily called ununoctium, but since the stability of this element is so bizarre it has yet not formally taken its place among the other elements. After some researchers proved that it exists in 1999, a few years later they had to conclude that their proof was based on some miscalculations and there were talks that a researcher had intentionally written bogus results. Element 118 did not exist. In 2006 though, researchers from US based Lawrence Livermore collaborated with Russian Joint Institute for Nuclear Research managed to create element 118 again.

The element was created by the bombardment of calcium ions into a target of californium, an artificial element with 98 protons, for three months continuously. To get the desired result, it was required that the elements being bombarded collide head on with a specific energy, a very rare phenomenon, failing to do which the

elements would just coolly pass through each other.

After all of this, only a mere three collisions of ions caused the infamous element 118 to be created.

What makes the element more mysterious is that it hasn't really been seen as such. After the required collisions, element 118 was created but it lasted for less than a millisecond. The only reason the researchers were able to find out that they had created the element was because they were able to study what the element broke down into and work their way upwards.

The researchers have said that the new element could help in the understanding of nuclear stability and the fission process. Another reason is what has been called 'the island of stability'. Scientists have been creating heavier and heavier elements since 1940, and they realized that as the elements become heavier they also became much more unstable. But weirdly enough some elements with a specific higher weight seem to be more stable than the others. Building element 118, or heavier and heavier elements, is one of the key ways to find out more about this island of stability. With a longer shelf life, heavier elements can be used in more and more applications.

And if you are wondering why we are talking about an element which was discovered in 2006, know that element


118 is just on its way to its new home on the periodic table, even though it was discovered ten years ago. The process for certifying a new element is a long one.

A year ago, researchers in Germany had attempted to creating element 119. The bombardment process is over- and right now they are sifting through their data to find any trace of element 119- and in the process make a high school student's life that much... heavier.

## The Strongest

So the the award for the strongest material known to man was for a long time given to Graphene, a truly remarkable material with some very interesting characteristics over which people are still falling over each other wondering how to put it to commercial use. And then enters Carbyne, with its own set of characteristics which makes Graphene feel like the once-famous kid-on-the-block. Carbyne's initial journey began way back in 1960, although there was not much known about it for until a few months ago when Rice University came out with its research stating that Carbyne truly was the strongest material known to man currently. Carbyne is a chain of carbon atoms held together by either double or alternating single and triple atomic bonds making it a one-dimensional material having only length, unlike Graphene which is more of a two-dimensional material having length and width. It is this characteristic of Carbyne which scientists believe gives it its peculiar mechanical and electrical properties.

Carbyne's tensile strength has been said to be double that of graphene; its tensile stiffness is said to be twice that of graphene and carbon nanotube and almost three times as much as a diamond's; and a 90 degree rotation of the material transforms it into a magnetic semi-conductor.

The only problem now with regard to Carbyne is in its mass production. Graphene is still not actively used in any major applications, although its synthesis has for now become much easier. Scientists hope that the same may happen to Carbyne- which currently can do so much but will have to wait for some time for the rest of the world to catch up with it. 



### Sun Bombed!

You're never too big to get photo bombed. Watch how the moon photobombs the sun <http://dgit.in/sphbmb>

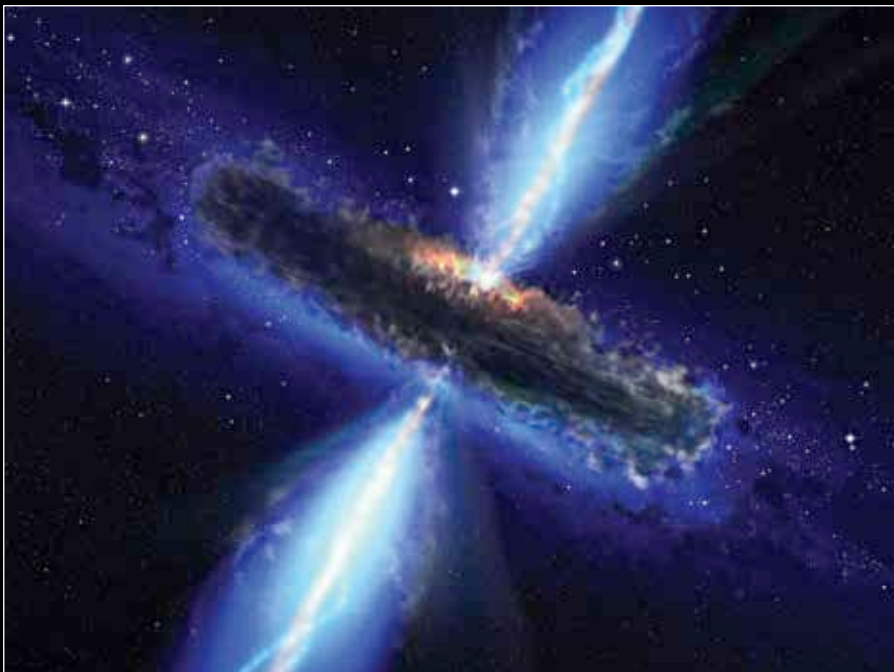


### First look inside an asteroid

By studying a couple of images taken between 2001 and 2013, scientists have been able to peek inside an asteroid for the first time <http://dgit.in/InAnAsteroid>

# Through the Universe, Darkly

Matter comes in many forms but nothing is more exciting than the exotic kind. We explain why exotic matter has gripped the scientific imagination despite its theoretical strangeness



Samir Alam  
[readersletters@thinkdigit.com](mailto:readersletters@thinkdigit.com)

*"The finder of a new elementary particle used to be rewarded by a Nobel Prize, but such a discovery now ought to be punished by a 10,000 dollar fine."*

- Willis Lamb, Nobel Prize Lecture 1955

In 1928, British physicist Paul Dirac shook the foundations of modern physics and theorised the existence of sub-atomic particles that had never before been imagined. The elegance of his mathematical brilliance

posited the existence of various types of matter without the support of any physical evidence. Relying solely on logic, observation and mathematical deduction, Dirac crafted equations that described how these matter particles would behave in our universe.

In 1932, an American physicist - Carl Anderson - stumbled across the physical reality that Dirac had prophesied. While running a study on cosmic rays, Anderson discovered that the shower of sub-atomic particles colliding with the Earth's atmosphere exhibited strange properties. In his photographs, Anderson observed

a particle that had the same mass as an electron, but was deviated against the magnetic field. He had stumbled on one of Dirac's predicted particles - a positron.

Paul Dirac was awarded a Nobel Prize in 1933 for his formulation of the Dirac equation, which predicted the existence of positrons and other Fermion (named after Enrico Fermi) particles, giving birth to the idea of antimatter. As one of the early explorers of quantum theory, Dirac pushed forward the quest to broaden physics beyond any known threshold. Since then hundreds of scientists have attempted to conceptualise, discover and understand different types of matter - subatomic, dark and exotic.

### What's the matter anyway?

Before we dive deeper into the esoteric world of scientific jargon, let's first understand what "matter" is.

Scientists have a slightly demented relationship with the universe. Physicists, in particular, spend decades reconciling their awestruck curiosity of the universe with their egotistical need to decipher it. The most fundamental of all is matter - that ubiquitous substance from which the universe takes its form. And even with something as basic and self-evident as matter, these experts still complicate reality with theoretical ideas.

For the longest time in human history, matter was thought to comprise the four natural elements: fire, water, earth and air (and ether, if you consider Greek theorists). However, the modern age moved beyond such archaic thinking and realised that matter is perpetually indivisible, with the atom being recognised as the fundamental unit of matter.

And for a while, things were good. But not for long.





## Black holes redefined

Stephen Hawking publishes new paper rectifying certain concepts  
<http://dgit.in/StepPaper>



## Frosty dunes on mars

This Wired space photo of the day takes a look at Russell Crater dunes - a favourite for their beauty and ability to depict crucial info about frost accumulation: <http://dgit.in/mdunes>

## New Matter, strange Matter

The nuclear age brought with it the realisation that atoms were also divisible. The discovery of sub-atomic particles like ions, electrons, protons and neutrons seemed to settle the matter once and for all. But then there was another revelation, which stands as fact till the present day – all particles are made up of leptons and quarks. In total, all matter seems to be made up of just six leptons, six quarks and 13 other particles that seem to be constantly on the move between leptons and quarks.

These "other" particles are responsible for naturally observed forces such as the electrical forces, which bind all bodies together and the Higgs boson, which gives all particles mass. So by the highly reliable finger counting method, we arrive at a total of 26 particles. And 26 more which are their exact opposites – the antiparticles – in terms of properties such as electric charge.

In attempting to put together a unified and elegant picture of the universe, physicists have created more theoretical particles than real ones they've discovered. But they're determined to close that gap with each passing year. As recently as 2012, experiments at CERN's Large Hadron Collider (LHC) near Geneva successfully observed a particle known as the Higgs boson, just a mere theory in 1964. A more recent finding whose details are still being figured out, was theorised in the Belle experiment conducted at the Japanese High Energy Accelerator Research Organisation, where scientists searching for the anomalous (meaning, it doesn't fit into their current picture of the universe)  $\Upsilon(4260)$  particle ended up discovering the theoretical particle  $\Upsilon(3600)$ .

Even with the discovery of all these new particles, there remains a category of matter, which only the bravest scientists take on: exotic matter. Any matter that doesn't behave according to normal predictable patterns is termed as "exotic matter". And in terms of sheer quantity, there's a lot of it.

## What is exotic matter?

Physicists have spent decades trying to arrive at a deterministic understanding of how things function. Determinism basically means that if all the rules are known and all the particles are observed, we can



Cosmic bodies are just like balls on a pool table, observing the same rules - as long as there are no black holes

predict how everything is going to interact – we'll be omniscient about cause and effect.

Imagine a pool table, with the different coloured balls as different particles; if you know all the facts of the table – mass, velocity, gravitational constant, etc – you can predict how each strike of the ball will alter the positions of the balls on the table using simple Newtonian physics. This same principle allows us to measure astronomical phenomenon, its determinism. And physicists are losing sleep over it.

## Strange ideas about matter

According to theoretical physics, all of reality can be reduced to mathematical models. If the mathematical equations are sound, then reality must conform to its predictions. It's not faith, not belief, it's cold, hard logic. And theoretical physicists make a living formulating these equations of certainty. These are the same equations that earn prizes and awards and help us achieve accomplishments such as space travel or manufacturing of cutting edge electronics.

Without them, we'd be lost, or at least a lot more uncertain of the consequences of our scientific actions. These models take into account all observable phenomenon and present them as related elements of energy causality; in simple terms, they tell us the way all energy and matter interact.



UNIFIED THEORY OF EVERYTHING – If it was easy, you'd be doing it

And since all energy is matter and vice versa, these equations have mathematical "remainders" or "constants" that need to exist for the equations to be valid.

In this manner, physicists allowed for different forms of matter, whether observed in nature or not, to be a part of reality. As long as the equations demand their existence, it is accepted that they must exist. However, as scientists have continued to broaden their perspectives from beyond the scale of the Earth into the distant reaches of space they've come across some troublesome issues causing them to cast doubt on all their models. The issues pertain to standardising the rules of the planets and stars to make them correspond with the rules of the electrons and atoms – unifying the models of General Relativity and Quantum Mechanics.

## General Relativity vs. Quantum Mechanics

We all know how to divide fractions using basic mathematics – numerator divided by denominator results in a quotient. And sometimes a remainder. Most of the times it's a simple fraction to reasonable decimal points; other times it reaches the infinity of pi. But it exists as a specific function on the number line. But when we deal with theoretical equations of matter and energy, the remainders aren't nearly as simple.

These remainders are what we term as exotic matter – those parts of reality without which the equation loses all validity. The two models of quantifying reality are split between General Relativity and Quantum Mechanics. Bridging these two models and creating one unified theory of everything (TOE) is the holy grail of Physics.

General Relativity is the descendant of Newtonian Physics (The concepts and equations that describe the precise relationship between all bodies, especially those we see in space). Albert Einstein's lucid theories of general relativity lay bare the nature of the universe and explain how cosmic bodies relate to each other within the fabric of space-time and gravity. Quantum Mechanics, on the other hand, operates on fundamentals that reject all of general relativity's predictions. It deals with the tiniest parts of the universe, that is the atomic structure, subparticles and



## A universe simulated?

We've debated this question to no end. A mathematician suggests that this may be a reality <http://dgit.in/1fsoarx>



## Astronomy Legacy Project

One team's goal to digitize every astronomical photo (shot before the 1990s) for everyone to enjoy online. Great, right? <http://dgit.in/1dZdjo1>

Space Age

energy waveforms. Its rules differ from those of general relativity making the two seem like exact opposites.

Think of it this way: if we hold the theories of general relativity to be true, then it's a fact that satellites revolving around a planet have a decaying orbit and will eventually collide with it over time. By that logic, why don't electrons orbiting the nucleus of an atom also collide? Conversely, quantum mechanics states that we can't ever measure the position and momentum of a particle simultaneously and that all observations are a matter of probability. Under that logical standard, space-time and gravity are fuzzy fluctuations in space. The impasse is exhausting.

To this day, scientists struggle to tie these two concepts together under a unified theory of everything. The search



This 370kg liquid Xenon experiment apparatus simulates neutron collisions using photons and xenon atoms

for exotic particles plays a crucial role in determining if these models can ever truly be integrated. The Higgs boson discovery takes us a step closer to this reality.

## Exotic WIMPs, Axions and strange Quarks

By NASA's estimates only 4 per cent of the universe is made up of ordinary matter such as stars, planets and galaxies. The remaining 96 per cent is just a vast empty void thought to be made up of "dark matter" or "dark energy". Scientists have no physical evidence to determine what's out there, besides their mere observation of the gravitational influence of the nothingness. They believe that all those extra bits, remainders and constants that are left over in their mathematical models of the universe actually do exist – far away in the distant void of the empty 96 per cent.

To explain this cosmic absence, scientists the world over have turned to the idea of exotic matter, particles that behave contradictorily to the laws of physics.

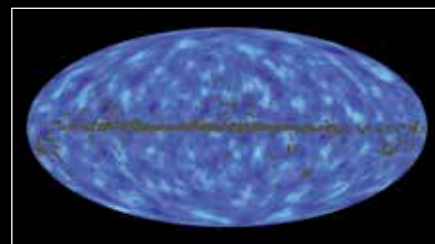
In October 2013, scientists at the Large Underground Xenon (LUX) project in South Dakota (USA) revealed that they were looking for a set of exotic particles known as 'weakly interacting massive particles' (WIMPs). They believe that the properties of WIMPs fit into the joint model which proves the presence of dark matter in the universe. But in the absence of any proof, the only way to make sense of their knowledge is to completely rewrite the laws of gravity under Einstein's general theory of relativity. This, of course, isn't an easy task and so far, has only led to failure.

WIMPs will not only help explain dark matter but will also fit nicely with the complex requirements of quantum theory such as supersymmetry and string theory. Researchers hope for even the slightest variation of WIMP type exotic particles as an encouraging sign since it would corroborate their hypothesis. Unfortunately, the quest for this particle has been on since the 1980s and has proven completely unsuccessful, despite LUX having super-sensitive equipment at its disposal.

People believe that if WIMPs aren't discovered over the next ten years, the odds of them being a real possibility are negligible. In order to explore alternatives, other scientists are already looking for another variety of exotic particles called 'axions'. These less massive particles are far harder to find as compared to WIMPs but with over a dozen active experiments active today, hope lives. Scientists believe that the mathematical modelling behind Axions is solid in its theoretical framework and could just as easily explain dark matter.

The University of Washington's Axion Dark Matter eXperiment (ADMX) has been in hot pursuit of an axion since 1995 but still hasn't found conclusive results. The experiment was recalibrated to a more sensitive iteration recently and is expected to find something in the next three years or finally set aside the idea of axions once and for all.

As the desperate times of null results weigh down scientists worldwide, another exotic particle theory is showing some




Such a vast universe and so little matter. Perhaps we're meant for more than just a physical existence?

promise – 'strange quark' matter. These denser versions of strange quarks are theorised to be formed inside massive neutron stars and fulfill the required criteria for proving dark matter presence in the universe. However, it's hard to detect these by nearly undetectable particles sitting here on Earth when they're only theorised to be found in neutron stars.

But there are worse outcomes than not finding strange quarks, axions and WIMPs; and that possibility is that dark matter is made of something that can't be found. That real astronomical exotic particles are only visible through their gravitational effects and nothing else. If this is true, then scientists have no chance of ever detecting them. This would be the ultimate failure for science: to have created a theory that can't be tested or proved.

## It's not over yet

The universe is governed by invisible laws, which align all matter into patterns of cosmic beauty. Humans in turn, by their very nature, yearn to unravel these laws and have looked across the cosmos to seek meaning. These laws have proven elusive and mysterious throwing humanity deeper into uncertainty and doubt. But it is this very mystery that has motivated countless experts across history to uncover that which was once unimaginable.

The quest to find exotic particles and dark matter may seem fruitless now, but with CERN's LHC as the last bastion of hope, there's reason to still be hopeful. Even if that were to disappoint, be rest assured that we haven't surpassed the limits of human imagination and innovation. Everything is something and nothing is everything, and humans are trying to figure it all out one particle at a time. 









## 1 APPLE IPHONE 5S

The Apple iPhone 5s is nothing like a typical "s" cycle upgrade. The future-proofing of this phone is obvious. It has the fastest processor, offers premium build quality and an excellent camera. Other than the processor and camera, the Touch ID feels at home straightaway. It is the best smartphone to buy in India today, if you do not have any budget constraints.

MRP: ₹53,500



## 2 SONY XPERIA Z1

This is the best Android smartphone around if you are on a look-out for a rugged flagship Android phone with water and dust resistance. Its 20MP camera is the best among all Android smartphones. It essentially incorporates the Xperia Z's form factor, with the power of the Xperia Z Ultra. It does cost a lot of money, which may make the potential customer think about the investment.

MRP: ₹44,990



## 3 GOOGLE NEXUS 5

Nexus 5 is recommended for its pure Google Android experience. It will get the latest Android updates first. The excellent full HD screen, slim and understated design and compact dimensions are a bonus. All said and done, if you want a smartphone that is well built, has the latest specifications and runs apps well, then the Nexus 5 is the smartphone for you.

MRP: ₹28,999



## 4 NOKIA LUMIA 1020

The Lumia 1020 is built on a hardware platform that has established itself to work well with the Windows Phone 8 OS. The PureView camera is sluggish despite the 2GB of RAM, but takes good photos. Regardless, if you want a good, slim, powerful camera in your pocket, then the Nokia Lumia 1020 should be your number one choice, as far as phones go.

MRP: ₹42,990



## 8 HTC ONE

This is currently the best smartphone by HTC. It scored highest in build quality and design tests for Android, though gets slightly bogged down by its below-par overall performance.

MRP: ₹42,900



## 5 LG G2

LG has truly surprised us. LG G2 is the fastest Android smartphone in the market, today. It scored the highest in benchmarks and offers the best screen of all Android smartphones. Plus, the big battery lasts you almost two days on a single charge. The G2's competitive price point is another big plus. The G2 is undoubtedly worthy of the 'flagship' tag.

MRP: ₹41,500



## 6 BLACKBERRY Z10

The BlackBerry Z10 is the best smartphone for anyone looking for a top of the line BlackBerry phone. It is a very good smartphone, with regards to the hardware and the potential of the spanking new BB10 OS. It offers excellent messaging and email features along with a very professional and classy design. The camera is excellent, and surprisingly matches up to the iPhone 5.

MRP: ₹43,490



## 7 SAMSUNG GALAXY S4

The Samsung Galaxy S4 is recommended for Samsung loyalists looking for the best Samsung Android smartphone. The S4 offers an exhaustive set of user interface features to differentiate itself. Performance is undisputable, and the display is one of the better ones around at this time. Despite its much-criticized plastic body one can't turn away from what is otherwise a very good phone.

MRP: ₹41,500



## 9 NOKIA LUMIA 1520

The Nokia Lumia 1520 is a gorgeous looking thing. It has a beautiful screen, a blazing fast processor and great camera technology.

MRP: ₹46,990



## 10 MOTO G

The Moto G is totally worth the price tag. With great performance and a simple design, it's perfect for someone looking for a budget Android smartphone.

MRP: ₹12,499





### 1 IPAD AIR

Shedding some weight and gaining a 64-bit A7 CPU, the iPad Air is one of the most desirable powerful tablets available. With a 9.7-inch Retina display, it offers a great resolution and it is the lightest tablet in its category. The 8,820mAh battery gives a charge of about 12 hours, which is the highest output out of any tablet in the market today.

Price: ₹35,900



### 2 GOOGLE NEXUS 7 (2013)

The new Nexus 7 is the best Android tablet, in our books. The tablet comes with stock Android 4.3 which is upgradable to the latest 4.4.2 KitKat goodness. It offers great performance thanks to the onboard 1.5-GHz Qualcomm Snapdragon S4 Pro quad-core processor and 2GB of RAM. It also offers a crisp 7 inch display, the best in its class, with a 1920x1200 pixel resolution.

Price: ₹24,000



### 3 IPAD MINI RETINA

If you don't fancy the 9.7 inch iPad Air, go for the smaller and equally powerful iPad Mini. The tablet has a mind boggling 2048x1536 pixel resolution screen in a 7.9 inch design along with Apple's 64-bit A7 processor. With a battery life of 11 hours, the iPad Mini is an impressive tablet.

Price: ₹28,900

### 4

#### SAMSUNG GALAXY NOTE 10.1 (2014)

The latest Galaxy Note 10.1 from Samsung is an expensive tablet, but also offers a variety of features. The tablet is powered by Samsung's Exynos 5420 chipset with a four cores running at 1.9GHz and another four cores at 1.3GHz, along with 3GB of RAM. The 10.1 inch Super Clear LCD panel offers a 2560x1600 resolution and comes with the coveted S-Pen stylus.

Price: ₹49,990



### 5

#### SONY XPERIA TABLET Z

Sony is known for making the best looking devices and the Xperia Tablet Z is one of them. Along with the classy look, the Xperia Tablet Z is comes with a Qualcomm 1.5GHz quad-core processor with 2GB of RAM and a brilliant 10.1 inch display with 1920x1200 resolution. The tablet also offers the same waterproof and dustproof feature that we saw on the Xperia Z smartphone.

Price: ₹43,000

### 6

#### XOLO PLAY TEGRA NOTE TAB

The Xolo Play Tegra Note Tab has a nice rugged design and runs on an Nvidia Tegra 4 chipset including a quad-core processor clocked at 1.8GHz and a GeForce GPU with 1GB of RAM – great for gaming. It features a 7-inch IPS display with a 1280x800 resolution, good quality speakers, and a stylus for doodling.

Price: ₹17,900



### 7

#### LENOVO YOGA TAB 8

The Lenovo Yoga Tab 8 is one of the best-built Android tablets we have seen – A full-metal body with a handy stand. The tablet runs on a 1.2GHz quad-core processor from MediaTek and an 8-inch 720p display which is decent. The Yoga Tab 8 comes with 3G data and voice calling – always great features to have, along with Wi-Fi for data communication.

Price: ₹23,000



### 8

#### SAMSUNG GALAXY TAB 3 8"

A nifty tablet, the Galaxy Tab 3 8" from Samsung is worth it if you are looking for a tablet with a calling facility. It features an 8-inch display with a 1280x800 resolution.

Price: ₹25,750



### 9

#### LENOVO IDEAPAD LYNX K3011

A reliable and slightly less expensive Windows 8 tablet, the Lenovo IdeaPad Lynx K3011 is a convertible device. It can be attached to a keyboard dock to run like a full-fledged laptop. Flexibility and design are the main USP of this tablet.

Price: ₹39,990



### 10

#### ASUS FONEPAD 7 (2013)

The FonePad from ASUS, which allows you to use your tablet for calling purposes, is back and this time it features an appealing design and is not heavy on your wallet.

Price: ₹14,999



**1 CANON 1D-X**  
If you can afford and want the best camera in the market today, you don't need to look any further than this beauty right here. Just look at it! The Canon 1D-X has an 18-Megapixel full-frame sensor along with two Digic 5+ image processing chips to help it push out 12 frames per second. Considering it's weather-sealed and built like a tank, it also doubles up as a weapon of self-defence. You will have to break the bank to afford it, though, which is a separate matter altogether.  
**MRP: ₹4,55,995 (Body)**



**2 NIKON D4**  
If you are not a Canon connoisseur, check out this powerhouse of the Nikon loyalists, the D4 houses a 16 megapixel full frame sensor paired with an EXPEED 3 image processing chip. The Nikon D4 camera comes with a 51 point AF system that has time and time again proven itself to be spot on, even when shooting a kids basketball game. The video on the Nikon D4 is absolutely mindblowing!  
**MRP: ₹3,89,950 (Body)**



**3 NIKON D800**  
The most megapixels to ever grace a DSLR. The Nikon D800 has a 36 megapixel, very controversial sensor. From what we've seen, the D800 reproduces detail like no other DSLR in the market at the moment. Many say it touches onto the fabled medium format territory when it comes to detail.  
**MRP: ₹1,89,950 (Body)**



**4 CANON 5D MARK III**  
The all-rounder. A 22 megapixel sensor paired with the same AF assembly as the Canon 1D X. The burst rate is bumped up to 6fps and the video quality is near cinema grade. Price aside, there's very little to dislike about the camera.  
**MRP: ₹2,17,995 (Body)**



**5 SONY A7R**  
The mirrorless camera that changed it all. Housing a 36 megapixel sensor, the A7R plays footsie with the Nikon D800, but in a much, much smaller body. Complimented by several Zeiss branded lenses, the A7R is ideal for the street photographer.  
**MRP: ₹1,42,898 (approx)**



**6 FUJIFILM X-E2**  
Fujifilm finally brought the X-Trans II CMOS sensor to its mirrorless lineup – and how! The X-E2 not only has amazing image quality, especially in low light, but also packs on-sensor phase detect pixels, with the ability to turn pre-AF on and off!  
**MRP: ₹62,127 (approx)**



**7 SONY RX100 II**  
The descendant of the point-and-shoot camera that raised the bar so high, that everyone is just trying to play catch-up. The RX100 II is compact enough to slip into your pockets, all while packing a *fast* f/1.8 lens and a 1-inch 20 megapixel sensor.  
**MRP: ₹42,990**



**8 FUJIFILM X100S**  
The best image quality you can get out of a point and shoot camera will come from the X100s. It is quick to focus and incredibly easy to use, but the 23mm f/2.0 lens can be limiting to some.  
**MRP: ₹74,999**



**9 FUJIFILM X20**  
Consider this the miniature X100s with a zoom lens. The X20 packs a 2/3" 12 megapixel sensor paired with a 28-112mm f/2.0-2.8 lens. Fast lens, fast AF, but just not very pocketable.  
**MRP: ₹39,999**



**10 CANON G16**  
Canon's latest addition to the advanced point and shoot category. We see an improved 12-megapixel BSI-CMOS sensor, but the lens is still the same one from the G15 – a 28-140mm f/1.8-2.8. This camera is great to carry around since it's light and manages to deliver some great images despite the tiny 1/1.7" sensor.  
**MRP: ₹34,995**





## 1 ACER ASPIRE V5-123

A budget laptop should be, by definition, inexpensive – but functional. This is where the V5-123 shines above every other laptop. Powered by an AMD E1 APU, this laptop gets more power than any of Intel's ultra-low end CPUs can. At the same time, the hardware is powerful enough to let you perform basic functions without frustration. It offers more than 200 minutes of battery life and has a decent keyboard and a nice touchpad. All this at a price that's half of what the competition demands. Not bad, eh?

Price: ₹24,719



## 2 LENOVO G500S TOUCH

This laptop ticks all the right boxes performance, price and features go. Packing in an Intel Core i5 CPU, a discrete NVIDIA 720M GPU and 4GB of RAM, this is one of the most powerful laptop under ₹40k. The laptop features Lenovo's island style keys, which are a pleasure to use and among our favourite laptop keyboards around. At under ₹40k the Lenovo G500s is undoubtedly a laptop we recommend wholeheartedly.

Price: ₹37,490



## 3 HP CHROMEBOOK 14

The purpose of the Chromebook is to the point computing at a low cost, and critically, very good battery life. Anyone who is already relying on Google's own ecosystem of apps and services would find switching to this platform a rather tasty deal. And Chrome OS works brilliantly in its limited scope. Try the Chromebook 14 for its fresh new perspective on desktop OSes.

Price: ₹26,990



## 4 DELL INSPIRON 15

Combine Dell's well-respected Inspiron product line with attractively priced configs and there are two very strong reasons to consider purchasing the Dell Inspiron 15 for a great all-purpose lap under ₹50k. It comes with Intel Core i5-4200U 2.6 GHz processor, Windows 8.1, 15-inch screen, 4GB DDR3 RAM, 500GB hard drive, and AMD Radeon HD 8670M 1GB GPU.

Price: ₹45,990



## 5 SONY VAIO PRO

At 1.06 kilograms, the Sony Vaio Pro 13 is probably the lightest 13-inch touchscreen Windows 8 ultrabook that money can buy. The Full HD 1080P IPS touchscreen display is one of the highlights of this ultrabook. It's a well-rounded package that exudes class and craftsmanship – normally a scarce commodity in the ultrabook space.

Price: ₹74,990



## 6 HP ENVY 15-J110TX

It is no surprise, looking at the power package, that the HP ENVY 15 j-110TX is one of the best laptops in the market when you're trying to throw ₹65k and get the best possible laptop. Its powerful hardware is the foundation of extremely good performance. It has an excellent keyboard to type out long documents on. Beats Audio ensures better-than-average audio performance, too.

Price: ₹64,990



## 7 DELL INSPIRON 15 7000

It's quite good to see Dell refresh the look and design of the Inspiron range of notebooks, starting with the 7000 series, both for the 14-inch and 15-inch versions. The resemblance to the much more premium XPS range is uncanny, and that is a good thing. It offers stable performance and very good battery life. But, the 15.6-inch display is still stuck at 1366 x 768 pixel resolution. But for that one shortcoming, the Inspiron 15 7000 is a very capable machine. We would recommend this for the good build, stable performance, much improved keyboard and very good battery life.

Price: ₹67,790



## 8 LENOVO IDEAPAD Y510P

The IdeaPad Y510p is a powerful entertainment laptop, which offers very good multimedia potential, and better than average gaming performance compared to most mainstream laptops. It's built well, with a premium look and feel. Don't compare it to an ultrabook, because it isn't one. This machine's for the performance junkies!

Price: ₹78,990



## 9 ASUS G750JX

The ASUS ROG G750JX is a 17-inch gaming behemoth that conquers any latest game with ease. What's more, this machine is 3D ready, letting you watch stereoscopic games or movies with a bundled pair of glasses and gaming headset.

Price: ₹1,49,999



## 10 ALIENWARE 17

Built like a tank, the Alienware feels rock solid on touch and has better-than-average onboard audio. This machine marginally loses out to the ASUS gaming rig due to a slightly lesser GPU, but this is still a winner in our books, packing in unmatched bling for gamers looking for a distinctive gaming laptop. One of the most iconic laptops ever!

Price: ₹1,29,990



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\*In hours when charged with a 5V/ 1000mA power adapter

\*\*D - Depth, H - Height, W - Width

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## 1 SENNHEISER HD 800

The HD 800 is a delight. A ticket to a stratospheric stereo experience - fairly neutral, with maybe a smidgeon more emphasis on the highs than the lows, and will woo you with tonal accuracy and soundstage rather than boomy thrills. However, given the rather astronomical price tag, and the fact that they need an amp and a quality source before they begin to justify their asking price, to say they're not for most people would be the understatement of the year.

Price: ₹79,900



## 2 SENNHEISER HD 700

Supreme dynamic range, pristine audio reproduction and with an ultra-comfortable listening experience, the Sennheiser HD 700 is perhaps the best headphone we've gotten, ever. But just like fine wine or other epicurean pursuits, this sonic indulgence is a pleasure restricted to the well-heeled audiophile.

Price: ₹59,990



## 3 AUDIO-TECHNICA ATH-M50

It's never too late to own a great pair of headphones so don't let the M50's launch date come in your way. The M50 has, since inception, been one of the most talked about headphones. The build quality, the neutral sound signature and the great value make it a highly recommended purchase for any audio enthusiast. In this particular price range it's the last word in true-to-source audio.

Price: ₹10,938



## 4 HARMAN KARDON CL

Everything about the Harman Kardon CL exudes understated class - the packaging, the pleather carrying case, the old-school design, and finally the matter black housing with steel trimming - it's all pure visual delight. Put them on and you're transported into a world of exceptional aural detail. And they're one of the most comfortable pair of over-the-ear headphones we've had. Slightly pricy? Yes. But justified

Price: ₹9,990



## 5 BOSE QUIETCOMFORT 20

The QC20i is a remarkably well-built set with an unusual ear-piece design. The large and ungainly silicon ear-buds are deceptively comfortable. The set comes with Active Noise Cancellation (ANC) which does an exceptional job cutting out background noise. The audio is very precise and the entire frequency range sounds just lovely.

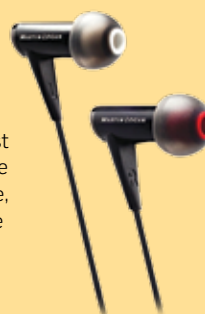
Price: ₹22,388



## 6 MARTIN LOGAN MIKROS 70

This is another great set and gives super-expensive behemoths a run for their money. At this price, this set is just unbeatable. Now the audio is on the brighter side and the bass isn't as prominent as we would like, but we're only nitpicking and the only reason the audio seems to fall short is because we have gotten too used to the HD700s.

Price: ₹9,900



## 7 STEELSERIES SIBERIA V2

This set has impressed us from day one. A gaming headset is supposed to reproduce all the aural feedback that a game is providing in the most accurate way possible. Other manufacturers have tried to do this, but few have succeeded in reproducing that feedback with a minimal loss in tonal quality the way the SteelSeries V2 based sets have. For a gamer, these are possibly the best headsets that you can buy in terms of quality and output.

Price: ₹11,890



## 8 ROCCAT KAVE 5.1

The best surround sound gaming experience that we have ever had from a headset. This set just excels at recreating great ambience, and if that's all you want, this set is perfect.

Price: ₹7,500



## 9 SONY MDR XB920

Unfortunately people like overpowering bass for some reason. That's where this headphone comes in. The MDR XB920 is a well-heeled bass-head's dream.

Price: ₹12,990



## 10 COWON EM1

The EM1 has steadily become a favourite workhorse here at Digit. These are easily one of the best performing in-ears for the price. You get a tangle free cable, decent build, and great isolation to cut out ambient noise on your daily commute

Price: ₹1,099 (non-mic for cheaper)

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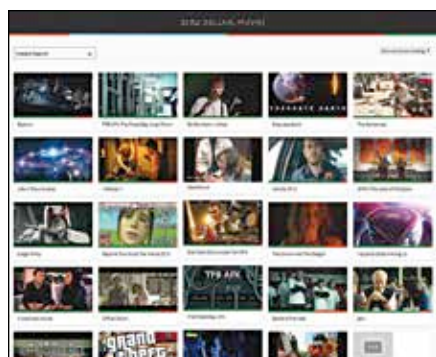
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## 1 ZERO DOLLAR MOVIES

Zero Dollar Movies (<http://dgit.in/ttwtzdm>) is an archive of all the full-length films available on youtube for free viewing. From known box office films to obscure-yet-interesting short films, this website compiles a huge chunk of that collection. Zero Dollar Movies aims to bring the cream of the youtube crop all under one banner and make it easier for people to skim through and watch those that they find interesting. It's always a great place for some pleasantly surprising (and occasionally ridiculous) finds. Worth a visit, and one can spend several hours entertaining themselves by digging through the contents of the website looking for something to watch.



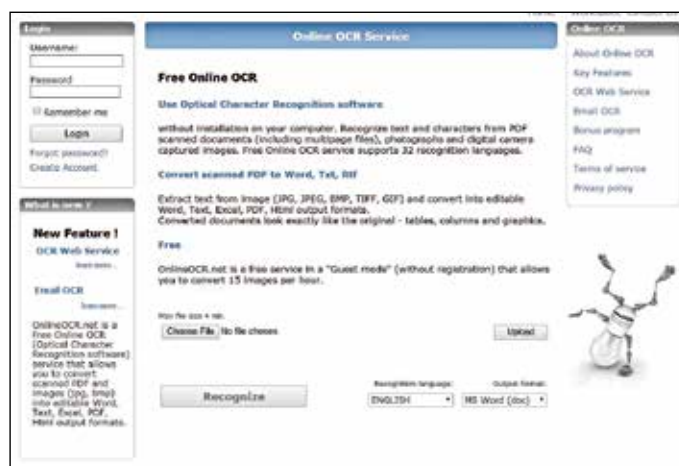
## 2 PIXLR

If you're looking for an online image editor, there's no competition, so far, really. Sure, there are umpteen online image editors out there, but unless you can afford something exorbitant like Adobe's Creative Cloud, Pixlr (<http://dgit.in/ttwtpxlr>) is the place to go. Pixlr has a user-friendly UI to its name. Not to mention a wide range of tools and effects that needs very little practical editing experience to get the hang of. It's segregation into Pixlr Editor and Pixlr Express is also very useful. Compared to the vast selection of option in Pixlr Editor, Pixlr Express may be limited. But it has everything you would need for a fast, on-the-go edit of a picture. Having it as an app as well doesn't hurt.



## 3 MEGA

Mega (<http://dgit.in/ttwtmega>) is the successor website to the vastly popular Megaupload. The latter was shut down, back in 2012 by the United States Department of Justice. The owner of Megaupload, Kim Dotcom, was subsequently indicted for alleged operations as an organization dedicated to copyright infringement. On the one-year anniversary of the DoJ seizing his life, Dotcom relaunched Megaupload as 'Mega'. This time as a cloud storage and sharing website. With an available capacity of storing 50GB on a secure cloud server for free, if you haven't got a Mega account already, jump to it! If you're interested in more space, Mega also offers upgraded accounts with no less than 500 GB cloud storage at ₹8500 per annum.



## 4 ONLINE OCR

Online OCR (<http://dgit.in/ttwtocr>) is a website that provides people with fundamental optical character recognition capabilities. This can come in handy when you have a hard copy of a document, and need to convert it to soft copy for editing, or simply converting into a format that can be read on a digital interface as text rather than an image.

The method is simple – scan said document, save as pdf and upload it on Online OCR. After processing, you have the option of saving the text from the file as a .doc file and do with it what you wish (within the law of the land, that is. Avoid using this for digitizing copyright material).



## 5 PRIVNOTE / WICKR

Sometimes, it's useful to take a leaf from the Mission: Impossible book. Privnote (<http://dgit.in/ttwtprvn>) is a website that creates self-destructing notes for you to deliver. It creates the note on a link that ceases to exist after it's opened once. Similarly, Wickr ([http://dgit.in/WicR\\_2](http://dgit.in/WicR_2)) is an app for Android and iOS built on the same principle. Create an account on Wickr, add people using their personalized IDs, and decide how long you want any message sent to them to be visible before it self-destructs, leaving no trace.



## 6 LIVESTREAM

Livestream (<http://dgit.in/1msHOWL>) was an interesting find. Much like the iTunes Store's video podcast section, this website streams live events. Live concerts, interviews, conferences, benefit events, videographic trekking – the list goes on. Very easy to use, Livestream has a large collection and a vast number of out-of-the-box and extremely interesting options for you to pick from. Other than the presently live events, Livestream also saves past events in its online archive, which is open to members to pick from. Membership is free, and although the website could use a little more organization and has a slightly unusual UI, it's still useful to keep a track of some events that appeal to an individual.

## 7 SCRIBBLE MAPS

Quite the Godsend for people who want to give directions borrowing from the old-fashioned way. Scribble maps (<http://dgit.in/ttwtsr>) is a portal which makes it possible for you to map out your route by placing markers and drawing lines on a pre-existing google map. Simple, effective and evergreen. It can come in handy for the people who need to make custom maps. Maybe for a flyer announcing the opening of a new store, an event at an obscure location or even a scavenger hunt. Scribble Maps is easy to use, and very convenient.



## 8 PRINT WHAT YOU LIKE

As the name suggests, Print What You Like (<http://dgit.in/ttwtpwyl>) lets you print web pages (or, well, anything with a URL that can be opened on a web browser) and do so after customizing to your own specifications. Remove annoying ads and popups from your print selection. This comes in handy when selecting web pages for publishing on an article or any other medium where you intend to highlight the important aspects of a web page. The user interface of Print What You Like is simple and easy-to-use.



## 9 PIPEBYTES

This website's ideal for all those people who have a problem with sharing files online because of security concerns. When files are transferred through websites such as Wetransfer or Mega or ge.tt or even something as frequently used as Google Drive, the process involves saving the data online or on a cloud server. Pipebytes (<http://dgit.in/ttwtpbt>) bypasses this step. The process is simple – make sure you and the person the file is being transferred to are online at the same time, select the file you wish to transfer, send the generated link to said person. When the person clicks on the sent link, the file transfer is started on the senders end while a simultaneous download happens on the receiver's end, thus making sure that the file does not stay on any server for it to be copied or tampered with, in any way. Perfect for people who question the safety of online file transfer websites/apps.



## 10 CLOUDCONVERT

The first thing one would notice when on the search for an online file converter is the over-eager abundance of video, audio and other media converters out there. There are also several websites for document conversion. To top it off, several websites that do overall file conversion tend to miss out on some essential (or essentially useful) formats.

Until now.

Cloud convert (<http://dgit.in/ttwtpcon>) is a far-reacher. It's tagline is 'convert anything to anything'. We can honestly say that it did not manage to convert our .docx file into an .ogg. Giving us the impression that maybe this website was over-selling its product.

But barring impossible file conversion, CloudConvert does an excellent job of converting files across a vast selection of formats, thus making it into our Top 10 list.





## 1 ANONYMOUS

An organization that literally does nothing but troll (for a cause), Anonymous is a worldwide sensation that brought trolling and hacking to the attention of the mainstream media. The power of anonymous is in its community and when you've got the largest Internet community in a world that's online, well, you get the most epic trolls of all time and on a scale that few can ever dream of.



## 2 JIMMY KIMMEL

Who's Jimmy Kimmel? Don't say that! Your ignorance offends us. A comedian, and sort of talk show host, of some note, Jimmy Kimmel has turned trolling into an art form (hasn't true trolling always been an art form?). Don't believe us? Head over to <http://dgit.in/1mzkq07> to learn about "the girl who tweeted wolf" and his other escapades.

## 3 NATHAN FIELDER

When you live in a world where a tweet (<http://dgit.in/1czWVhj>) can end hundreds of relationships, you know the world is seriously messed up. Nathan didn't ask for much, just that you tell your better half that "you haven't been completely honest with them." An innocuous statement by itself, but when you don't reply after that, the fallout can be devastating, or maybe just hilarious.



## 4 JEFF HARRIS

What do you do when an obvious scamster tries to scam you into giving away your \$2,200 Powerbook G4 for a song? You give him a Powerbook of course (or a P-P-P-Power Book! actually)! What started out as a plan turned into an elaborate prank involving a three-ring binder, some stray keyboard keys, an international team of sleuths with the skills of Bond himself mark this elaborate troll as a major event in Internet history. With the help of his buddies on the forum, Jeff managed to convince the scamster to pay the taxes and other duties associated with shipping a laptop from the U.S. to the U.K. What he actually shipped was what you see above, a simple binder with pasted keys, hand-drawn USB ports and an assortment of weights to ensure that the package weighed as much as a real powerbook. Members of the forum who stayed in the U.K. actually went to the extent of tracing out the location of the scamster and even tried to catch the moment of revelation (<http://dgit.in/MKsJQL>).



## 5 VRT

All of us are painfully aware of the hoops we must jump through when we must, unavoidably, call a call centre. Mobistar, a telecom provider in Belgium had a reputation (in Belgium, duh) for being among the worst of such offenders. A couple of pranksters took matters into their own hands and shipped a 20ft shipping container to Mobistar's offices. Yes, you read that right, a shipping container. What Mobistar didn't know was that the container wasn't empty. It contained a group of pranksters and VRT cameramen, who'd volunteered for the job, for the express purpose of giving Mobistar a dose of their own medicine.

What followed was a three hour struggle by employees at Mobistar to try and make some head way with the container company's seemingly moronic call centre employees (the pranksters in the van).

Head over to <http://dgit.in/1mzo6zx> to witness the hilarity that ensued.



## 6 DAVID THORNE

After a long day of mindless browsing and brow-beating (if you're working with particularly dull co-workers) it comes as a relief to read through the wanderings of an intelligent mind that is, sometimes, subject to the same situation. David Thorne has done everything from trying to pass off a dog as a bear (by wrapping him in a rug) to trying to auction images of seven-legged spiders (he later decided that eight was more appropriate).

A particularly hapless focus for his, let's call it humour, has been the hapless Simon Dempsey; a colleague and fellow designer who's been bullied and harassed to the death by the machinations of David Thorne's malicious genius. Head over to <http://www.27bslash6.com/> for some enlightenment. Try to control the urge to write to him though.



## 7 PHD\_IN\_EVERYTHING

A know-it-all busybody is the worst colleague one can have, but when that same know-it-all actually knows-it-all and has a PhD\_in\_everything and resides on reddit, you know you're in the presence of pure genius. He's been known to talk knowledgeably on everything from presidential policy to healthcare reforms to even metabolic mastication. Don't believe us? Head over to <http://dgit.in/1fH9Awz> and see for yourself.

## 8 WILLY ON WHEELS

Wikipedia was (and is) considered to be the bastion of the free Internet by many. But as with any institution, Wikipedia has faced its fair share of abuse and vandalism, but from none more prolific than Willy on Wheels. He's moved pages back and forth, even editing Wikipedia's home page once and harassed the admins plenty. His motives still remain unclear though.



## 9 SOMETHINGAWFUL

This one's a bit of a departure from the other posts here and whether it's trolling or bullying will probably depend on your age and disposition. Regardless, a messed up order, some slight abuse and a demand for an apology got escalated to 4chan, and 4chan as you know will never let anything slide. The resulting fallout for Adam Goldstein (at the centre of the controversy) who was treated to the full brunt of the Internet, was something awful to behold. Read the full story and more at <http://dgit.in/1l7Zr3m>

## 10 TEAM ROOMBA

Trolling in games is quite frequent, but sometimes it's taken to another level altogether. Enter Team Romba, trolls extraordinaire, this team has been known for messing about in Team Fortress 2. The most famous of their pranks involves a Trivia quiz where incorrect answers keep you locked at the spawn room. If you want more, all you have to do is answer this question, who spun the gold for the miller's daughter? Enter your answer here (remember that names are proper nouns), [http://dgit.in/<your\\_answer>12](http://dgit.in/<your_answer>12) to get to your destination.





### CLASSICS



#### 1 SUPER MARIO BROS.

If there is one character that can be said to be the face of gaming, it has to be Mario and Super Mario Bros. is his claim to fame.



#### 2 HALF-LIFE

Epic. Astonishing. Ground-breaking. Few games have, and will ever, match the true glory of this game.



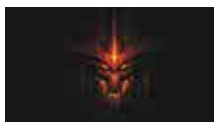
#### 3 DOOM

Considered to be the most significant and influential title in the games industry, Doom is the game that brought FPS to the masses.



#### 4 DUKE NUKEM

A heinous combination of badassery, debauchery, depravity and solid shooting mechanics somehow worked together to create this most beloved of shooting games.



#### 5 DIABLO

The birth of the hack n' slash RPG genre can be laid at the feet of this game. You must rid the world of Diablo. It is your duty, your destiny.



#### 6 STARCRAFT

Real-time strategies truly came of age the day Starcraft hit the gaming scene. There were many before it, but few as good.



#### 7 TETRIS

The iconic Tetris deserves its place in this list for three reasons— it's insanely addictive, everyone's played it and there were more than 143million official copies sold.



#### 8 PAC MAN

A billion dollars is a lot of money, but when you've made that much money in quarters (25cents) at an arcade, well, you've got a hit game on your hands.



#### 9 DANGEROUS DAVE

This side-scrolling masterpiece is one that almost every kid here must have played at some point in their lives.



#### 10 PRINCE OF PERSIA

While she's no Princess Peach, the faceless prince's quest to save his nameless princess has captured many a gamer's heart.

### PC GAMES



#### 1 COUNTER-STRIKE

A perilously addictive multiplayer game, this one needs no introduction.



#### 3 DOTA 2

This is a controversial one (LoL fans will skewer us), but DotA 2 is the defining game of the MOBA scene; much loved by everyone.



#### 5 WORLD OF TANKS

Who would have thought that a game involving lumbering steel beasts could be this much fun? To top it off, the game is free. Play it now!



#### 7 MAFIA

The only game that could recreate the aura of the 1930s mafia families, this game is as much a window into the past as it is a great game.



#### 9 DARK SOULS

Once this game sucks you in it will not let go, and you won't want it to. Dubbed by many as the "hardest action-RPG on the planet", this is one game you don't want to miss.

### QUAKE III



#### 2 QUAKE 3

The best death-match experience. Need we say more?



#### 4 NFS

Porsche Unleashed: There are racing games and then there's NFS. The best game in the franchise however has to be Porsche Unleashed.



#### 6 HOME-WORLD: CATAclysm

The best space RTS by far, Cataclysm is one of the few games that had it all. A gripping storyline, excellent combat and great graphics.



#### 8 BORDERLANDS 2

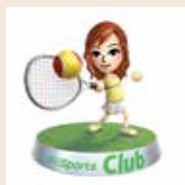
Yee-haw and all that old boy. A game where futuristic cowboys and vault hunters and everything else collide in one gloriously chaotic experience that is unparalleled.



#### 10 FIFA

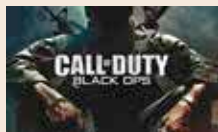
This game is like old wine, very good old wine. A game that matures gracefully with the passing of time and one that still remains the best football game in the world.

## CONSOLE GAMES



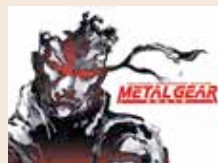
### 1 WII SPORTS

No matter what you sat about Nintendo, they know how to make a great game. Wii sports is, somehow, among the highest grossing games of all time. Quite a feat.



### 2 CALL OF DUTY

This franchise began its life on the PC but it somehow managed to almost completely take over the console scene and is (or has been played) played by almost every gamer.



### 3 METAL GEAR SOLID

A franchise that is as solid as its titular main character, Solid Snake, the series somehow caught the gamers' fancy and has been a mainstay on the PlayStation ever since.



### 4 HALO

The game that sold a console. Developed by Bungie for the Microsoft Xbox, Halo can be said to be single-handedly responsible for the sales of said console.



### 5 JOURNEY

"Journey isn't a game, it's an experience" say the harshest of critics. This sublime amalgam of art and game, a magical experience.



### 6 GTA V

The game maybe brand new but it's shown console gamers true freedom in an open world that gamers are as familiar with as their own bedroom.



### 7 GOD OF WAR

Kratos's tale of bloody revenge and murderous bloodlust appeals to the primal savagery in every gamer's heart. If Halo sold the Xbox, God of War sold the PS2.



### 8 GRAN TURISMO

Considered by many to be the definitive driving simulator, Gran Turismo is the very best driving simulator out there. It's too bad that the PC has nothing like it. Yet.



### 9 THE LAST OF US

Few games have ever crossed Metacritic's 90+ mark and this is one of them. This is easily among the finest games ever made for a console.



### 10 SHADOW OF THE COLOSSUS

A game that requires patience and perseverance, Shadow of the Colossus is exhilarating and gripping at the same time.

## MOBILE GAMES



### 1 SNAKE

Nokia's remake of this masterpiece, for the N-gage, still remains the best Snake game on any platform.



### 2 ANGRY BIRDS

The pigs stole our eggs. We must get them back! Geronimoooo!



### 3 FLAPPY BIRD

A surprisingly simple game to play, Flappy Bird is exceedingly difficult to master and ridiculously addictive. You're probably playing it right now aren't you?



### 4 DOODLE JUMP

A badly drawn doodle that earned its developers over \$10,000,000 must be treated with some respect..



### 5 TEMPLE RUN

A game of the endless runner variety, Temple Run somehow managed to make its way to the top of the gaming charts on almost every platform and spawned dozens of clones.



### 6 SUPER-HEXAGON

A plucky triangle, insanely catchy music and simple gameplay make for a very addictive game.



### 7 VECTORHD

Think of this game as Mirror's Edge, but in 2D, with shorter levels and on a mobile device. A great game and a fun one at that.



### 8 COLLISION EFFECT

It's your job to ensure that multi-coloured spheres don't go around banging into anything other than a sphere of the same colour. Nothing could be simpler. Few more difficult.



### 9 MINI-SQUADRON

Not a very well-known game this, MiniSquadron is actually one of the best 2D dog-fighting games around. Shame on you if you haven't played it yet.



### 10 SKYFORCE RELOADED

Games in the vein of 1942 are a dime a dozen but few are actually fun to play. This modern remake however is the best of those very few.



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### GABE NEWELL

**Abilities:** Gaming evangelist, USD \$1.2 billion net worth, Creator of Portal  
**XP Points:** 51 year old, Played Super Mario and Doom on Burroughs Mainframe (Geek cred)  
**Achievement Unlocked:** "Microsoft Millionaire". PC gaming lord and saviour.  
**Quote:** "C'mon, people, you can't show the player a really big bomb and not let them blow it up."

1 If you've been getting whooped on any MMORPG on Steam by Rabscuttle feel honoured. You've just been killed by one of the most revered and definitely most innovative persons on the gaming scene. Gabe Logan Newell is the co-creator and managing director of Valve Corporation, the company that brought us titles like Half Life and Portal. He also handles the online distribution side of the business - Yes - Steam. After winning it big with his software producing gig for Microsoft, he began his personal quest to change gaming in 1996. Gabe is more than just gaming management but a majority owner of the Valve Corporation and its decisions reverberate with his personality and philosophy. The industry renowned troll ninja of the forums, Gabe is the father of what is sure to become the future of gaming - Steam Machine. Having revolutionised the online distribution and revenue model with Steam since its initial release in 2003, Gabe is now intent on making Linux the backbone of gaming and the Steam Machine endeavour. He can also be found hitting it old school on YouTube with "Stop a Gaben" remix video.



### ELON MUSK

**Abilities:** Visionary, Inventor,  
**XP Points:** 42 year old, midwifed eBooks industry, USD \$ 9.1 Billion net worth  
**Achievement Unlocked:** Electric Cars, PayPal, Space Travel, Reminded everyone how cool Tesla is  
**Quote:** "I've said I want to die on Mars. Just not on impact."

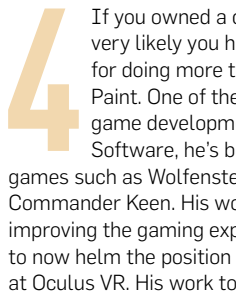
2 As a boy he taught himself programming and coded a game for sale at the age of 12. After selling his software company Zip2 to Compaq (HP) in 1999 for 22 million dollars, he started his next venture PayPal almost immediately. Within three years he had sold it to eBay for USD 1.5 billion, of which his personal share was 165 million dollars. He was 31, just getting started. He's moved beyond software now and after a youth littered with degrees in Economics and Physics (Wharton School) with some dabbling around in the Applied Physics department at Stanford (PhD dropout), it seems only natural that Musk now does what he was meant to do - solve the energy crisis, improve the environment and conquer space. Or at least make space within reach of citizens, not only governments. With projects like Tesla Motors and Hyperloop to his credit, why can't we please throw a few Nobel prizes at him already?



### JEFF BEZOS

**Abilities:** Entrepreneur, Innovator, Space Geek  
**XP Points:** 50 year old, Clock of the Long Now, USD \$28 Billion net worth  
**Achievement Unlocked:** Amazon, Space Travel, Tried dismantling his crib as a baby.  
**Quote:** "What's dangerous is not to evolve."

3 Jeff Bezos is part of the select few people in history who make paradigm shifting changes. He hasn't done this through science and technology alone, but by understanding what people want. And then giving it to them. And instead of opting for baser items like fast food and risqué entertainment he gave them an easy access to books in the digital world. His idea for an online book store in the early nineties gave birth to Amazon.com, the world's largest online store for books. Since his initial ideation on a cross country drive across America, Bezos has made Amazon not just a place for digital purchases but evolved the way books are owned and experienced through the creation of the Amazon Kindle. After having irrevocably changed the way people shop, read and experience the digital life, Bezos has set his sights even higher - to the stars. With a youth spent in school and college groups about space exploration and development, Jeff Bezos started Blue Origin with the intention of making it possible for "anybody to go to space". Cool.



### JOHN CARMACK

**Abilities:** Game design, rocket development, VR futurist  
**XP Points:** 43 year old, Wolfenstein 3D, Doom, Quake, USD \$ 4 million and a bajillion geek points  
**Achievement Unlocked:** Open source advocate, USD \$ 4 million  
**Quote:** "It's done, when it's done."

4 If you owned a computer in the 1990s, it's very likely you have John Carmack to thank for doing more than just doodling in MS Paint. One of the earliest pioneers of core game development, and a co-founder of id Software, he's been responsible for creating games such as Wolfenstein, Doom, Quake and Commander Keen. His work to push 3D graphics and improving the gaming experience have brought him to now helm the position of Chief Technology Officer at Oculus VR. His work to further innovation through sharing and open source software development has led to contributions in Linux based gaming and the broader use of his work in other games like Half Life and Call of Duty. And like all geeks has taken steps towards making space travel fun again with the creation of Armadillo Aerospace. Now, with the innovations in virtual reality technology like the Oculus Rift, it's only a matter of time before we see the second wave of Carmack's genius.



### SATYA NADELLA

**Abilities:** Cloud computing expert, R&D leader  
**XP Points:** 22 years at Microsoft, USD \$45 million net worth  
**Achievement Unlocked:** First Indian CEO of Microsoft, introduced cricket to everyone at Microsoft  
**Quotes:** "I fundamentally believe that if you are not learning new things, you stop doing great and useful things."

5 An Indian is the new Chief Executive Officer of Microsoft. But the mysterious Satya Nadella is more than a nationality now, a symbol of ambition and success for many Indians. No longer will Indian parents have to taunt their kids with statements like "Don't you want to grow up to be like Bill Gates" and instead maybe invoke Satya Nadella. The engineer-of-Hyderabad origin from Manipal Institute of Technology (the other MIT), went to America for a Masters in Computer Science and went on to take up an MBA from Chicago's Booth School of Business. A long term veteran of Microsoft, the 46 year old joined the company in 1992 in the enterprise side of operations. He went on to not only become the executive vice president of the Cloud and Enterprise group in the company but also pioneered its advanced technologies in digital rights management and interactive television, further boosting Microsoft's growth in the high margin world of business solutions as well as consumer centric operations. As he takes the helm of one of the largest technology company, the whole world's eyes will be watching his every move.



## MARK ZUCKERBERG

**Abilities:** Speaks Greek, Fencing (origin of poking?), Making friends...ahem.

**XP Points:** 29 years old, 1 dollar salary, USD \$28 billion dollar net worth

**Achievement Unlocked:** Medal of Fear winner,

**Quote:** "The biggest risk is not taking any risk."

6 Did you know Facebook's colour is blue because Mark Zuckerberg is colour blind and can only see blue clearly? With books, news articles, business schools and even Hollywood script writers taking inspiration from the life and works of Zuckerberg, he's the anonymous friend - someone everyone is connected to but doesn't really know. Whether its on your computer or on your cell phone, the chances are that you've come across Zuckerberg's creation if not been a part of it. An innovation that created a whole new vocabulary for the world - friending, unfriending, poking and newsfeed have all found their way into interpersonal communication while at the same time changing the nature of interpersonal relationships. He has been a divisive figure in the world of technology, on one hand demonstrating true start up success with ruthless business skills and on the other hand an overwhelming supporter of education and social welfare. Mark Zuckerberg is one of the true innovators of this generation - the only thing that is left to wonder about him is what will he do next.

7 Ranked as one of the most powerful women in male infested world of Silicon Valley technology firms, Marissa Mayer has a pedigree that most professional would envy. She began her journey into engineering with excellence in the field of artificial intelligence throughout her academic career in Symbolic Systems and Computer Sciences at Stanford. Debuting her career at Google as the 20th employee and first female engineer, in her 13 years with the company she has worked on a wide range of them including Google Search, Images, Books, Toolbar and finally ending her tenure there as the Vice President of Local, Maps, and Location Services. So when she was hired as the CEO of Yahoo it was only natural that she would shake things up and she has, by overhauling Flickr, the company's file sharing service and acquiring Tumblr. And even as she continues to face criticism from many corners of the business world there is no doubt that her contributions at Yahoo are any less significant. Her focus on rebuilding Yahoo back to its former glory has already shown results with the stock price doubling over a year after her appointment.



## MARISSA MAYER

**Abilities:** Artificial Intelligence development,

**XP Points:** 38 year old, USD \$300 million net worth,

**Achievement Unlocked:** First female engineer at Google,

**Quote:** "Geeks are people who love something so much that all the details matter."



## NEERAJ ARORA

**Abilities:** Professional networker guru, Startup angel

**XP Points:** 35 year old, US Patent Holder - twice

**Achievement Unlocked:** New tech role model, Made WhatsApp available for ₹16/month plan.

**Quote:** "I'm generally a good guy."

8 The newest kid on the block, Neeraj Arora is an unknown. So new that he doesn't even have a Wikipedia page yet. But that's no big loss since you can find him on Google Scholar as a patent holder of "methods and systems for email attachment distribution and management and second for an email integrated file delivery". Not to mention that since he's just negotiated a deal that led to Facebook acquiring WhatsApp for over USD\$ 19 billion he's bound to move on to greater and bigger challenges. Technically designated as the Vice President of Business Development for Whatsapp, Arora is not just another IIT graduate making it big in Silicon Valley. With a degree in engineering from the premier institute and a MBA to boot, his career was set with a job in Corporate Development for Google before he decided to risk it all in an unknown startup in 2011. That startup is now known and beloved by over 450 million people as the ever popular WhatsApp messaging app. And Neeraj Arora is now a household name.



## RUZWANA BASHIR

**Abilities:** Adventure travel, Mountain climbing,

**XP Points:** 30 year old, Google protege, experienced travel in 40 countries - priceless.

**Achievement Unlocked:** Climbed Mount Kilimanjaro, Build schools in rural Tanzania, Fulbright Scholar

**Quote:** "If you are going to start something, try to work at a startup first."

9 It's apparent that there are more women in board rooms than in computer labs where the real innovation happens. But as the playing field levels we expect to see more Sheryl Sandbergs and Marissa Mayers behind the computer as well the board room table. One such emerging stars to look out for is Ruzwana Bashir. The next generation of innovative startups will come from unexpected places; emerging economies and women, and Bashir is a potent combination of both. A prodigious mind, the 30 year old started off exceptionally with a degree from Oxford where she read Philosophy, Politics and Economics and was became the first Asian woman elected as the President of the Oxford Union. She went on to Harvard as a Fulbright Scholar all the while pursuing her greatest passion - travel. She leveraged that passion and started Peek.com - a travel company, that is slowly conquering the USD\$ 27 billion dollar industry. Already she has impressed Silicon Valley luminaries such as Google Chairman Eric Schmidt, who's officially her mentor and Twitter co-founder Jack Dorsey, both of whom have invested in her and her ideas. As one of the most promising figures in the industry she's already been called the "Queen of the Valley" making moves to conquer the world.



## TRACY CHOU

**Abilities:** Python, Distributed Systems and Data Driven Design, Pinterest

**XP Points:** 29 year old, True Girl Geek, 14,200+ Pins, 157,000+ followers

**Achievement Unlocked:** Rejected all the old guards of Silicon Valley, Collection of prettiest pics on Pinterest

**Quote:** "There's a lot of opportunity ahead. It's a little bit frightening and exciting at the same time."

10 It would be easy to call Tracy Chou a ninja in the world of software engineering. But it's an undeniable fact that Chou is one of the next big minds of the industry. Only a few years ago, Chou graduated from Stanford where she was awarded a B.Sc in Electrical Engineering and a M.Sc in Computer Science. After the prestigious Mayfield fellows program and much vied for internships at places like Google and Facebook she made a counter-intuitive decision to start small. Instead of accepting offers from her internship employers and other big brands, she chose Quora. She was the second engineer and 15th employee hired by the industry infant in 2010 and after just over a year of exceptional performance was poached by Pinterest to focus on product development, platform and infrastructure design. Having completed just over two years at Pinterest and a wealth of rich experience behind her, its only a question of "when" and not "if" she is going to start her own company in the valley. We just have to wait to see how she solves the world's problems through technology.





## 1 NOKIA FAKES AD

Nokia launched the Lumia 920 in late 2012 and released a nice advertisement video highlighting the video quality and most importantly the Optical Image Stabilisation feature. The advertisement looked absolutely brilliant and the picture quality along with the OIS technology seemed really out of this world.

Too bad, Nokia faked that. When the advert was examined frame by frame, there was an instance where a reflective surface revealed that the advert was actually shot using a professional camera crew with a proper setup and not the Nokia Lumia 920. The cat was out of the bag and then Nokia went into damage control. An apology was released where they said that the advert was an attempt to simulate the effects of the new OIS technology and their intention was not to mislead. Along with the apology they released another video which was shot using the Nokia 920 and actually showcased the OIS technology.



## 4 SILK ROAD TAKEDOWN

No this isn't the ancient silk trading route that we're talking about but a marketplace on the dark web. The dark web is a separate internet on its own with high anonymity. Silk Road was a website where you could indulge in all sorts of illegal activities from buying narcotics, foreign currency and high calibre weapons to hiring hackers and assassins.

The FBI went after Silk Road primarily for the illegal narcotics trade and it took them years before they could zero in on the culprits. This could be attributed to the fact that Silk Road used anonymous cryptocurrencies for most transactions. When the FBI finally took it down they also dismantled a huge chunk of the dark web and took down as many TOR routers as they could. While this was a major loss for the people behind Silk Road it wasn't that long before Silk Road 2.0 reared its ugly head and is still online.

Dead Pirate Roberts, the person behind Silk Road is actually a moniker that was handed down from the previous administrator and it won't be long before the next dead pirate rises.

## 2 SNOWDEN BLOWOUT

Everyone knew that the United States spies on anyone and everyone on the planet. The sheer scale of this kind of spying had been depicted in varying details in a host of fictional works. Even when little incidents of spying were reported in the media no one paid any attention. That's until Edward Snowden, leaked a bunch of classified documents to the world's media. Things like these had happened before but what added credibility to this person was the fact that he worked for the CIA and then for the NSA. Both hardware and software backdoors were reported to exist in a load of products manufactured by US companies. The German government even released an advisory urging German companies to avoid using software products and services made by American companies. America went to ridiculous an extent of having the Bolivian President's plane forced to land when rumours surfaced that Edward might've been travelling with him.



## 5 NET NEUTRALITY DEATH

Net neutrality is a concept which requires each and every customer of an ISP to be treated on equal footing. The plan that one subscribes to will affect the bandwidth cap and the data transfer limit (also known as the FUP limit). However, the quality of the connection which includes the contention ratio and routing should be the same. This is what Net Neutrality is all about. What the ISPs in the USA wanted to do was to have two lines. One which has a high contention ratio which means that when a lot of people use the line the quality of the line drastically reduces. The other line would be a premium line where a high quality is maintained even if the number of users sharing the line increases. These ISPs finally had their way when the net neutrality laws were thrown out by the federal court. Indian laws can be described to be archaic compared to the law in the USA and when the legal system in that country goes for a toss our ISPs could be follow suit.

## 3 MOBILE BENCHMARK CHEATING

One of the ways mobile phone hardware are compared is by running a synthetic benchmark. Antutu and GFXBench are two of the more



popular mobile benchmarking software so when a certain Samsung smartphone achieved a spectacular score people got wary. After all there were other phones with similar hardware but they didn't score well. So someone used the very same benchmark software but gave it a different name. This time the phone didn't give the same score despite multiple runs. Samsung's firmware was then analysed and found to have a little script that increased the processor's capabilities only for benchmarking software. When this little piece of information was released people started following the same process for different phones and a few other manufacturers including HTC, LG and ASUS were found to be cheating in the benchmarks as well. These devices were later de-listed by the benchmarking companies.



## 6 HACKING

The importance of having unique passwords for each service that you sign up for was made all the more clearer last year. Forbes, Kickstarter, Adobe, Target, University of Maryland, LinkedIn, eHarmony, Last.fm, Twitter etc. are just some of the companies that got hacked and have confirmed data theft. If you've had an account on any of these sites then you need to change your password.

While hacking incidents targeting individuals are numerous (even the website of Nepal's President was hacked) many of the victims pointed the finger at chinese hackers. A security company called Mandiant released a report highlighting a Unit 61398 of the People's Liberation Army. Turns out it's a Cyber Warfare department of the military which has been accused for targeting government offices worldwide other than mainstream companies. You can check out the Lastpass website to figure out if your account was compromised.



## 7 PATENT TROLLING

One fine day you'll get a cease and desist letter mentioning a few vague technological terms. It so turns out that some little element in your company's product "infringes" a patent held by the complainant. You can either fight the patent in court or pay a moderate fee to settle out of court, often priced such that it seems to be the better option. Congratulations! You've encountered your first patent troll. Something as small as having a rounded rectangle design (patented by Apple) could entail a lawsuit from firms whose sole objective is to collect patents on the cheap (often from bankrupt firms) and then sue everyone on the planet.

## 8 PLANNED OBSOLESCENCE

A commonly accepted practice when it comes to manufacturing is that of planned obsolescence.

When a product is made it is designed to fail after a certain period of time. The printer industry is one of the prominent culprits. Most printers have a page counter inside which counts the number of prints that has been printed since it rolled off the assembly line. Another way is to have circuits which prevent the ink cartridges from being used for a longer time. If that wasn't enough then the printer uses all colour ink cartridges for printing black and white content, despite having a black cartridge separately.

Even Apple does it but under the guise of "a brilliant design" which has the battery sealed inside the body and the only way it can be replaced is by sending it back to Apple for a hefty price. Even in electronic devices components that are sensitive to heat are often placed right next to a heat source.



## 9 CONSOLE CONTROVERSY

The eighth generation consoles had their own share of controversies with Microsoft's XBOX One taking the cake. Months ahead of launch Microsoft announced it's always on feature

which meant that the console would pay attention for visual and audio cues 24x7 since gesture was part of the user experience. Critics on twitter were told to "deal with it" by a Microsoft employee who soon "quit on his own accord". Then hardware issues were rampant, this included a grinding noise that many owners experienced. Lastly, swearing while using Upload Studio could get you banned from Xbox Live.

The Playstation4 wasn't bereft of its share of controversies. Due to the poor treatment of employees at Foxconn (they made the PS4) certain employees started sabotaging units on the production line. This resulted in the blue light of death error for units. A video streaming feature on the PS4 was stopped after certain users started uploading mature/nonsensical content.

## 10 BITCOINS

Bitcoin has been riding a wild roller coaster ride with the exchange rates reaching ridiculous heights and then plummeting down

to unknown depths. However, this isn't the controversial part. Given the anonymity the currency became favoured by a lot of illegal elements and thus the entire infrastructure around the cryptocurrency came into the crosshairs of the law.

One controversial incident was when a certain group of miners came together under a single pool and started mining. What started out as a common practice of getting coins faster became controversial when the cumulative computational power of this group neared 50% of the overall bitcoin computation in the world, this meant that the group alone could ratify or for that matter reject transactions on a whim, thus, giving them control over every transaction that would have taken place in the bitcoin network, thankfully they stopped and enforced rules to prevent breaking the 51% barrier.

A rather recent problem that cropped up is that of transaction malleability. Bitcoin transactions are one way only and requires a confirmation to mark a transaction as complete. One hacker managed to trick the system and make it seem as if a transaction did not take place at all, this caused the system to repeat the transaction over and over. However, money was still getting transferred and the hacker made away with \$2.7 million!







### 1 SIMCITY

One of the all time favourite franchises of gamers all around the world, Sim City enjoys massive fan following, and contributes millions of dollars to EA's annual revenue. It's a game where you play god and simulate real life, sort of. With millions of dollars spent on its creation and millions more on advertising, one would expect one of the most anticipated games of the year to at least work when you finally hit that launch button. Unfortunately, EA's SimCity was the worst disaster in gaming in a long time. The perfect example of how not to launch a game.



### 2 WINDOWS 8/ VISTA/ME

After using the Windows platform since its inception, we have no doubt in concluding that Microsoft is probably jinxed. There's no doubt about it; for some reason the "every alternate OS is a disaster" theory seems to hold true with Windows ME, Vista and 8 being complete disasters. To be fair however, Windows 8 is less of a disaster than the other two. How do they consistently mess up? They're a software company after all, for god's sake!



### 3 APPLE MAPS

Navigating your way around the known world is now a lost art. Few can survive without the comfort of a handy digital map but what happens when that map doesn't exist? Apple Maps gave us a glimpse of that horrific reality when they unleashed (for what mad reason we don't know) their own maps service on the hapless masses.

### 4 SEGWAY

The portable transport of the future; a two-wheeled device that you just stand on and will take you whizzing around wherever you want to go, be it in the mall, on the streets or even on the moon. Unfortunately, it never caught on, with anyone. Initial speculation reported that it was "as big a deal as the PC" and "as revolutionary as the Internet". Was it? Nah! The whole thing fizzled out in a matter of days.



### 5 FACEBOOK HOME

Facebook's quest for domination of your digital screens is a never-ending struggle, a quest that it always seems on the brink of achieving. Facebook Home was literally supposed to replace your mobile's home screen with Facebook. Maybe it was because nobody wanted to actually showcase their addiction to the world or maybe they just actually didn't care (there's hope for this world after all).

### 6

#### NOKIA N-GAGE

Nokia's been at the forefront of innovation, a market leader in all things mobile and despite their recent downfall, they still remain a much-loved and respected company. The Nokia N-Gage, released sometime in 2003 was a brilliant device, a true portable gaming machine. Unfortunately, it was too early for its time and a little clunky as well. There weren't enough games and though people loved it, there wasn't enough they could do with it. A sad state of affairs indeed. We would have loved to see it succeed.



### 7 ADOBE PASSWORD BREACH

Among other things, Adobe is known for its exorbitant pricing policies and certain arm-twisting tactics to get people to pay for their services, many of which are now hosted online. On October 2013, hackers got into Adobe's servers and walked away with account information on (possibly) more than a 100 million accounts, 38 million of which were active ones; the hackers also got their hands on credit card information and even part of Photoshop's source code!

## YAHOO!

### 8

#### YAHOO! MAIL

Yahoo had been digging its own grave by, for whatever reason, sitting dormant and watching the rest of the Internet evolve. When they finally woke up it was almost too late and they got desperate, redesigning and rebranding themselves left and right. An unfortunate fallout of this was the redesigned email page, which was, if anything, a dysfunctional work of art. A sad day, indeed.



### 9

#### BLACKBERRY PLAYBOOK

Another brilliant device that was let down by its own ecosystem (or lack thereof), the BB PlayBook was a well-designed and well-built device that was running BB's much anticipated BB10 OS. Unfortunately, despite everything else going for it, including ridiculously low pricing, the device just wasn't functional to catch on. A disaster from the start.



### 10

#### OUYA

Kickstarted with much fanfare, the Ouya was hailed as an affordable console into the living room. Unfortunately, the device, while very good, was a little too basic in its functionality and despite launching with a handful of great games, issues with the controller and the lack of a comprehensive library doomed it to failure.

1

## EVERNOTE

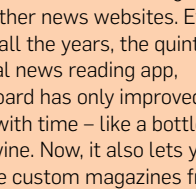
If you're on a smartphone, tablet, or a browser window of your beloved PC or Mac, Evernote is the best bet when it comes to efficient notetaking and saving quick nuggets of information (either through typing or taking a photo) on the cloud so that there's no chance of it getting lost easily. More than that, retrieving notes saved on Evernote is very easy. The service also has quite a nifty OCR to scan through texts captured in a photo note and showing you results (if any) for search related terms. Just give Evernote a try, if you haven't already. We guarantee you won't regret it.



2

## FLIPBOARD

When it first arrived, Flipboard was a breath of fresh air in a mobile devices world devoid of a classy, eloquent reading app for your social networking feed and other news websites. Even after all the years, the quintessential news reading app, Flipboard has only improved over with time – like a bottle of fine wine. Now, it also lets you create custom magazines from different sources, including your social networking feeds. If you've never tried Flipboard, it's time crawl out of that hole you were hiding in and bask in the warm glow of this app.



3

## KINDLE

Amazon's ebook reading app is now ubiquitous and is simple to use and offers access to your entire Amazon library. Just download it on your smart device, enter your Amazon credentials, connect to the Internet and sync all your Kindle ebooks to any supported device. Not only this, you can sync notes, bookmarks, and the last read point from a book on one device to another. Reading heaven!

4

## WHATSAPP

Facebook Messenger's there, so are apps like Nimbuzz, WeChat, and many others. But there's no competition to Whatsapp, an almost ubiquitous app found on all smart device users. It's annoying, it's distracting, but there's no escaping the charm, appeal and utter convenience of this ridiculously inescapable app. It's the only messaging app that most people need, circa 2014, as WhatsApp is an absolute must-have download, if you have more than two friends.



5

## ONEDRIVE

What started off as SkyDrive is now known as OneDrive, Microsoft's very own cloud storage service. It's a great tool to have on your smart device, especially to backup and sync all kinds of files from your smartphone, tablet, PC or Mac – whether it's at home or work – all at once without a hitch. Synced files can also be accessed through a standard Web browser and the service allows for sharing data through linked folders – either with the outside world at large or specified recipients or fellow OneDrive users. You get 7 GB of free storage, students additionally get an extra 3GB to play with. Time to run riot, eh?

6

## INSTAPAPER

If you spend hours reading on your smartphone or tablet, Instapaper is one app that you probably would do well to use. Because as a mobile reader, it's not always a given for us to be able to download a web article at the press of a button – especially when you're on the go, where cellular data is erratic and expensive. In such cases, use Instapaper to tag and save articles for later reading on your device itself. Seriously, you don't even need an internet connection to read the saved apps.



7

## SKYPE

Many have come and many have gone, but when it comes to video chatting and VOIP there are few services that hold their own like the way Skype does. You can video chat in HD 720p, voice call other Skype users from around the world, or call real cellular mobile or fixed landline numbers situated anywhere in the world (with purchased call credits, obviously). There's a reason why businesses and casual users prefer Skype for their chatting needs, and it's the same reason Microsoft broke the bank to purchase it in a multi-billion dollar deal.



8

## FOURSQUARE

It's a location-aware social network that's taken the Interwebs by storm. Foursquare has cleverly clubbed the GPS tagging with the added layer of gratifying gamification to award recognition and perks to its user base. It's also given the word 'mayor' a whole new meaning. Get in on the act!



9

## GOOGLE MAPS

The only GPS navigation app that you should use on your iOS, Android or any other platform for that matter. Google Maps is quick, extensively covers Indian cities and towns, and is completely free. It also gives you POI reviews, voice navigation, and other ways to find your way from A to B or scout a location like a boss.



10

## INSTAGRAM

One of the most popular apps ever, Instagram's huge base of users means that if you want your photos seen by an audience, you have to be here. Beating Flickr, Instagram leveraged iPhone photography and spurred the genre to new heights. Still going strong!



### ANDROID APPS

**1 DASHCLOCK**  
When it comes to having a lock screen widget customization app, nothing beats this one.



**2 NOVA LAUNCHER**  
Best launcher. It offers a whole hog of customization options, that's simply unmatched.



**3 ES FILE EXPLORER**  
It brings a lot of Windows' desktop UI's familiarity to the Android platform – browsing files and folders, unzipping RARs, etc.



**4 SWIFTKEY**  
Quite simply, this is the best touchscreen keyboard ever, something that really goes a long way in making 'typing' great fun.



**5 APPLOCK**  
Besides locking screen, how about locking every single app on your phone? You're welcome.



**6 LLAMA**  
This is an interesting location-aware app that automates a lot of things. Just try it.



**7 UNIFIED REMOTE**  
This app turns your Android device into an extensive universal remote for your Windows PC.



**8 TASKER**  
This lets you automate Android like no other, putting it to work like a charm.



**9 AIRDROID**  
This is a remote desktop app for your Android device, letting you work on it like a PC.



**10 GOOGLE NOW**  
Apple has Siri, but Google Now's in a different league altogether. It's scary and mesmerizing!



### iOS APPS

**1 ITUNES U**  
iTunes U is great for students who want materials as it offers access to courses from some of the best universities.



**2 APPS GONE FREE**  
An app that lets you know when apps worth downloading have gone free for a limited duration of time.



**3 DAY ONE APP**  
Want to get into the habit of recording the minutiae of your life? Day One is an exceedingly beautiful app to do this.



**4 GARAGEBAND**  
Probably the most powerful music recording software that you can use on a mobile device. It has no rival.



**5 TWEETBOT**  
An absolute must-have app for heavy Twitter users.



**6 REEDER 2**  
Reeder is an excellent news reading app for iOS. Using the app you can subscribe to custom RSS feeds or services like Readability and Feedly.



**7 CAMERA+**  
This adds a ton of features to the iPhone's camera. Camera+ offers access to a lot of filters and features for image editing.



**8 IMOVIE**  
A simple yet powerful video editing app. iMovie is one of the best in the business.



**9 KEYNOTE**  
Without doubt the best app to create presentations. Keynote puts most other presentation tools to shame.



**10 ALIEN BLUE**  
Addicted to Reddit? Wish you could browse the 'frontpage of the Internet' as easily on your phone as on the desktop? Then, Alien Blue is the one for you.



### WP8 APPS

**1 6TAG**  
While there is an official Instagram app now available for WP8, 6Tag offers a lot more than any other app does.



**2 BOOKVIZER**  
This is probably the best ebook reader available on the Windows Phone platform where you can get books from anywhere.



**3 NOKIA CAMERA**  
If you would like control over the minutest aspect of your photograph, then Nokia Camera is the app to use.



**4 FHOTOROOM**  
Since there is no Snapseed on WP8, the next best choice is fHotoroom. This is a very well rounded editing app.



**5 HALO: SPARTAN ASSAULT**  
The magic of Halo on a smartphone. What's not to like?



**6 TETRIS BLITZ**  
Tetris Blitz is a time based game, where you eliminate the most number of lines asap.



**7 HEALTHVAULT**  
A Microsoft made app that essentially is a very well rounded health tracking solution.



**8 DI.FM**  
This one is for all the electronic music lovers out there. Di.fm app keeps it real.



**9 ASPHALT 8: AIRBORNE**  
Asphalt 8 is an incredible racing game that has to be tried. Yes.



**10 TUBEPRO**  
With no Youtube, TubePro allows users to not only upload videos, but also save videos from the website onto the phone.



## PRODUCTIVITY

### 1 LIBREOFFICE

For a free and open source office suite, Libre Office gives you quite a lot. An absolute essential.



### 2 GOOGLE DRIVE

The best way to store and synchronise your files with collaborative editing.



### 3 FOXIT READER

Foxit Reader is our favourite software for reading or working on PDF files and it's easy-to-use.



### 4 EVERNOTE

Evernote takes note-taking to the next-level with its host of features and numerous management options.



### 5 FREE MIND

Free Mind is the best tool you can use to map your mind and gather your thoughts.



### 6 DUAL MONITOR

An extended task bar for people who just can't work without multiple monitors.



### 7 LAUNCHY

Ditch that start menu and still launch stuff quicker by using this nifty little software.



### 8 NOTEPAD++

Your one-stop solution for a text-editor which doubles up as the perfect source code editor too.



### 9 WUNDERLIST

A cross-platform task management software that's easy to use.



### 10 TEAMVIEWER

The best software for remote-accessing your desktop. Useful for conferencing too.



## MULTIMEDIA

### 1 VLC

VLC came and conquered the world with its simple yet amazing video playback capabilities. You won't use anything else after you've used it.



### 2 IrfanView

It's the easiest to use image viewer for Windows which has a ton of features and supports many formats.



### 3 K-Lite Codec Pack

K-Lite Codec Pack is a collection of the most used AV codecs in one package. Install this and play almost everything.



### 4 WINAMP

Winamp has been whipping the collective behinds of Llamas from a decade now. Yes it's dead now but it's still great.



### 5 PLEX

Plex is an excellent and feature-rich piece of software for use in media centres or HTPCs.



### 6 FREEMAKE VIDEO DOWNLOADER

Freemake supports video downloading from almost every popular video sharing site online.



### 7 HANDBRAKE

The best free and open source transcoding software available. Its multithreaded too.



### 8 ITUNES

If you have iDevices, this is the way to go. Not like there's much of an option right? We kid iTunes.



### 9 AUDACITY

Loved by most audio editors, Audacity is a very good digital audio editor without a steep learning curve.



### 10 SKETCHUP

SketchUp makes 3D modeling a child's play. You'll be amazed at your own creations.



## UTILITIES

### 1 AVAST

Avast's been our favourite free antivirus solution for a long time now. It has one of the best threat detection rates out there.



### 2 7-ZIP AND WINRAR

It's a tie between 7-Zip and WinRAR. Both of these are the best archive manipulating utilities available.



### 3 GOOGLE CHROME

Though IE and Firefox had their share of the limelight, Google Chrome is now arguably the best browser out there.



### 4 DAEMON TOOLS LITE

Your one-stop solution for creating or mounting disc image files and working with virtual devices.



### 5 μTORRENT

A popular, very small yet extremely functional Bittorrent client.



### 6 SKYPE

The best VOIP service which even functions as an instant messaging client.



### 7 STEAM

Currently the world's best game distribution and tracking platform. 75 million users await.



### 8 DROPBOX

Great file hosting that offers great file synchronisation and cloud storage features.



### 9 CCLEANER

Sweep your PC and clear all the unwanted, temporary and even malicious data.



### 10 TOR

Conceal your location and surf the web anonymously using this free software considered to be the best out there.





# Wi-Fi trouble, BSODs, freezing systems. And more...

We'll solve them all. It's Team Digit to the rescue

## Game runs ultra slow

I recently bought an HP ProBook 445 which had Ubuntu pre-installed. I later installed Windows 8.1 on it. I like to play games and so I installed Assassin's Creed III on the laptop but it ran extremely slow. The laptop is sufficiently equipped for gaming but I couldn't resolve this issue. Is it a driver problem or something else? Please help.

The laptop specifications are:

- AMD A6 CPU;
- 8GB RAM;
- AMD Radeon 8450G.

—Vipul Yadav

**A** The HP ProBook 445 is a decent laptop for regular use but it's meant strictly for casual gaming and some occasional mid-range gaming. The HP ProBook 445 uses a combination of the integrated AMD Radeon HD 8450G APU processor and a dedicated yet entry level AMD Radeon HD 8570M in asymmetric CrossFire mode while using Alternate Frame Rendering (AFR) to render different frames on the two graphic cores. Though this sounds great, the combination suffers from micro stuttering like most other dual graphics solutions. In the larger scheme of things, the performance of a dual graphics solution mainly depends on the driver support for a particular game. So try updating your graphics driver > reinstall the game > run it again at low settings, it may work.

## I see BSODs

I built a new desktop for myself recently and chose to install Windows 7 on it. Once the PC was properly assembled, I ran the Windows 7 setup and everything went fine and Windows booted up without any issues. I later remembered that I had forgot to enable AHCI in BIOS so I rebooted the PC and enabled it inside the BIOS. But after doing so, I saw that the

PC started having BSODs frequently. Is it because of enabling AHCI? Please advise how to get rid of this issue.

—Dipesh

**A** This BSOD issue is a known issue that most people face after installing Windows 7 first and then enabling AHCI. It's not difficult to fix too as you only have to edit the Windows registry. To do this, first ensure that you have administrator privileges and you've disabled AHCI again and then carry on. First press [Windows] + [R] to open Run box > type regedit > navigate to HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\services\msahci > right-click the word "Start" from the right-side pane > Click "Modify". Next change the value in the edit DWORD value window to 0 > Click OK. Now you should exit regedit and reboot the system and go to the AHCI settings and change your SATA controller to AHCI. Doing this would make you boot right into windows and your BSOD issue will be resolved.

## Long charging time!

Sometimes when I don't have my phone's charger with me, I usually charge it via any USB port of my PC. The problem that I face here is that, charging my phone through the USB port takes a long-long time as compared to the wall charger. Why is that? Is something wrong with my phone

or my PC? All the other USB powered devices seem to work absolutely fine on the same PC so I am skeptical about the PC having anything to do with the charging issue in the first place.

—Saunak Gupta

**A** A standard USB 2.0 port that is connected to a root hub has to share 500mA of current whereas for a USB 3.0 port the power shared is up to 900mA. Considering that you connect your phone to a USB 2.0 port, the max power that your phone receives is 500mA which is less compared to what it receives via a standard wall charger and that is why it takes a lot longer to charge your phone via a USB port. Also, if for example, you have many USB devices connected to your PC and your phone is plugged in with the same group of devices, it's then competing with the other devices for power which also increases the charging time dramatically. To improve the charging time, you'll have to try and connect your phone to preferably a USB 3.0 port and also disconnect other unnecessary devices.

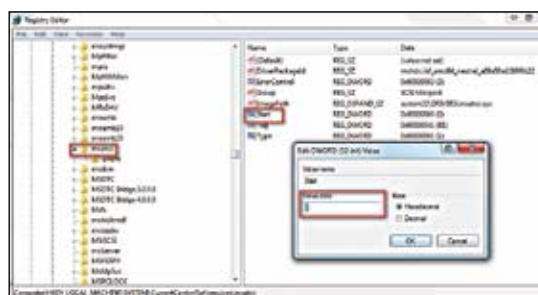
## RAM trouble

I have 3 year old PC with the following configuration:

Intel Dual Core E2200 2.20GHz | 1GB DDR2 | 145W PSU | Windows 7

In a bid to get rid of the low memory problems in my PC, I recently purchased a 2GB DDR2 PC-6400 RAM module. I now have a total of 3GB RAM in my system but after installing the memory module when I finally started my PC, the boot screen froze and it doesn't move ahead from that point. As a result, I can't use my PC. What should I do now? Do I need to purchase another RAM module?

—Rinku Barsal



You need to edit the registry to enable AHCI

## Manage passwords better

There are some nifty tools out there that can help you manage the hundreds of passwords you use on a daily basis.



## Geeky parenting gadgets

BleepBleeps a Kickstarter that aims to guide parents through the different stages of parenting, using a set of connected gizmos

**A** Since you haven't mentioned the model no. of the motherboard that you're using along with the exact details of the new RAM, we can't possibly check whether there is something wrong with compatibility. But from the looks of it, we sure can say that you should go and check the website of your motherboard's manufacturer and see the list of compatible RAM modules. Next, check whether the RAM module that you bought is supported. If you find that the RAM is compatible, your next course of action should be to check whether the module is installed properly in the slot. Another way of checking the RAM module is to just install the new one in your system and remove the old RAM and try booting into the OS.

### Where's the Wi-Fi?

I set up a wireless network in my home recently with some help from a guy sent by my Internet Service Provider. Later, when I tried connecting my phone or even

my laptop to my home network, I could see the network SSID on both the devices because my network isn't hidden. The problem is that I couldn't connect to the network even after trying several times. I also made sure that I didn't enter the wrong password while I was trying to connect to the network. What's the reason for this issue? Help me resolve it.

-Naval Kurdi

**A** Usually the root of most Wi-Fi connectivity problems is interference or driver incompatibility or even firmware incompatibility. To troubleshoot this, you first reset your wireless router because if there's something wrong with it, a reset might fix it. If you still have the same issue, it's quite possible that the wireless channel that is currently being used by your Wi-Fi router may be congested. To check if that's actually the case, download "inSSIDer" for your laptop from here: <http://dgit.in/inSSID>. It is a popular utility used to troubleshoot

network issues. An app called "WiFi Analyzer" can do the same from your phone. Next scan the network using the app to find your network. If you see that your router is using the same channel as many other routers within your range, you should log into your router's configuration menu and change the channel used by your router from the wireless network section. If you still have no luck in connecting your devices to your network, try to update the firmware of your wireless router by visiting the website of your router manufacturer, checking for an update to the router's firmware and downloading the update if there is one available. Consult your router's user manual to understand the process of updating its firmware. After you've done updating the firmware, you should be able to connect your devices to your wireless router. If nothing works for you, then contact your ISP and ask them to send in a technician **f**

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## YOUTUBE

YouTube is the single most popular video collection on the internet; from tutorials to music videos, YouTube sees uploads of over a hundred hours of video every minute and this number is still rising. But despite its international popularity most users are unaware of its full potential. Here are a bunch of must know shortcuts, features, secrets and tricks on YouTube, along with some third party solutions to help you get the most out of your YouTube experience.



### Replay/loop videos easily

The ability to loop a video, be it a hit song or a viral video, is a fundamental must have which YouTube somehow natively doesn't support. Having to stop whatever you're doing just to come back to a video and click replay is a pain right? Uses [www.infinitelooper.com](http://www.infinitelooper.com) to solve this nigggle. The easiest way to loop an active YouTube video is to replace "youtube" in the video's URL with "infinitelooper". The video will start playing on the Infinitelooper webpage on a perpetual loop. The page also gives you a slider option with which you can specify the part of the video you wish to have on loop. You can also paste in a Youtube URL on the infinitelooper website which will accomplish the same goal.

For those of who who're not looking to breakaway from the YouTube interface and onto another website, there are browser extensions you can add. The "SmartVideo for YouTube" extension is available in the Chrome store (<http://dg.it/smrtvid>) as well as a Mozilla add-on (<http://dg.it/smrtvid>).



### Adding videos to queues

Many times you may want to set up a series of videos on YouTube to watch in sequence



YouTube .....	14
Advanced Steam Tips.....	16
Facebook Paper .....	18

{ Tips & Tricks has its own page numbers, and does not follow the rest of the magazine's page numbers. This is done to ensure that you can cut out and save T&T in a separate folder for later reference. }

but can't find a suitable playlist. Whether its a series of music videos or webisode series, the ability to queue up a series of videos is essential. And even though YouTube has a make your own playlist feature, it's not the most efficient way to queue up videos for a casual or short-term need. We'll present you with two methods of accomplishing this goal.

First - you can use the Watch Later option that YouTube has on its site. This feature requires you to have a YouTube account to function. You can find the icon of a small clock on the right side of the video control panel

and on the bottom right corner of a video thumbnail on the website. Clicking this button adds the video to the "Watch Later" tab of your profile. You can add as many videos as you want and when you're ready for viewing just check them all and press the "Play all" button. You also have the option of adding them to a new or pre-existing playlist on your profile. The "Remove watched videos" is also a handy tool to ensure your "Watch Later" list doesn't get too cluttered.

Second - if using the Watch Later option is too much of a hassle or if you don't wish to

login to YouTube the Queue-Music website (<http://queue-music.org/>) serves just as well. This simple and low key website, does more than music, contrary to its name. You can use its single page web interface to make a queue of your own. In the first column search for the videos you want, add the videos to the second column and start playback in the third column. The website has a few limitations as no thumbnails for the search option and a YouTube embedding that doesn't allow many YouTube playback options. Just Play, Pause, Next/Previous Video and Save - which gives you a URL link to your queue.



### Creating custom/infinite playlists

The playlist options on YouTube provide a lot more features for those who wish to put in a little more effort. Useful features like skipping videos and looping single or multiple videos are easily integrated into a single user interface. The easiest way to accomplish this is to use the "Watch Later" option to select your preferred videos and then group them into single or multiple playlists based on your desire.

You can also use the "Add to" link (under the view counter of any video) to pull up the playlist options without interrupting the active video. The options in the menu allow you to organise, label, delete and edit your playlists as you desire. The maximum limit for any playlist is 5000 so you can feel free to go nuts with your selections. When you're ready you can also start the playlist by clicking your username in the top right corner of the screen and scrolling through thumbnails of your playlists. The autoplay button in the active playlist makes looping just a click away.



Use the SmartVideo extension to loop videos infinitely



The same add-on is available on Firefox as well.

## Get to the good part right away

You may have heard of the Wadsworth meme or the Wadsworth constant. Initially started as a Reddit joke it postulated that the initial 30 percent of any YouTube video is just a waste of time and its better to just skip it. And although it became popular in its meme form as a clever critique of bad uploader habits, YouTube took notice and included it as a feature on its website. To use the Wadsworth Constant, just add "&wadsworth=1" to the end of any YouTube URL.

For those of you who wish to inspect the JavaScript that accomplishes this here it is: `javascript:location.search+=(location.search?'&':'?')+'&wadsworth=1'`

## Keyboard shortcuts

YouTube also has built in keyboard shortcuts that can

not only save time but make it easier to work with videos. Most people know that the "spacebar" on their keyboard can be used to play and pause videos. Other intuitive buttons are: Left/Right arrow button to rewind and fastforward 5 seconds at a time, Up/Down to increase and decrease volume, and the Home/End button to jump to the start and end of the video, respectively. The number buttons of the keyboard take you to the 10 percent point of the video i.e. pushing 5 takes you to the 50 percent point and 8 takes to the 80 percent point.

## Search like a boss

YouTube is big, really big. With over six billion hours of content streaming every month its hard to sometimes find what you want. Using YouTube's search engine can only get you so far and it helps to know a few tricks that can make the process more effective.

- Add the "allintitle:" tag before entering any search term. So if you're looking for the latest CES footage simply input "allintitle: CES".
- If you want to exclude specific terms from the results use the excluding tag, e.g. if you want to get all CES videos without 2013 in the title input "allintitle:CES -2013".
- If you're looking for a specific channel then all you need to add the word "channel" next to the keyword e.g. "CES, channel" for all CES related channels.
- To find new or recently released videos add the words "today", "this week", "this month" after the keyword e.g. "CES, this week".
- For pulling up videos in high definition add "HD" to your keyword e.g. "CES, HD" and for 3D videos add "3D".
- You can also directly search for playlists e.g. "CES, playlist".
- Full length videos by adding "long", e.g. "CES, long".
- And if you wish you can combine variations of these tags to the search term e.g. "CES, long, HD, this month".

## Watching YouTube with friends in sync

The fun of watching something with friends and family

is usually enjoyed on a television in one's living room. But YouTube also has the ability to be watched by multiple people on different computers, in different places, simultaneously. The best third party service is called Sync-Video ([www.sync-video.com](http://www.sync-video.com)). The service allows you to create a "room" in which up to 50 people can be invited to watch synchronised videos and chat at the same time. The process is easy - register (guest or full), set up a room, invite people by sharing the room's URL start the URLs of the videos you want to watch and have a great time.

## Searching for foreign language content

YouTube is available in 61 countries across the world in localised languages and text scripts. If you're looking on the default URL the likelihood is that you're missing out on many videos that are shared using foreign languages due to different typing scripts such as Russian Cyrillic or Arabic. The easiest way to do this is to scroll to the end of any YouTube page and toggle the "Language" settings e.g. selecting Hindi, now the search bar will display a tiny keyboard icon. Clicking on the icon will pull up a virtual keyboard using the Hindi script which is mapped to your physical keyboard.

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Creating playlists on YouTube

## YouTube Test Tube

YouTube TestTube is the place to keep track of YouTube's new features that are constantly being introduced or experimented with. But be warned that these are raw products and are expected to be glitchy and flawed. Only the brave need apply. (<http://www.youtube.com/testtube>)

your permission to run. Simply paste the video's URL into FullRip page and click Convert. Before clicking Convert you can also select whether you want the video or just audio (MP3 only). In both cases, the next page gives a host of options on the different video formats that the selected URL is available in from 480p to Full-HD or 3D. The audio rip option also gives you choices



TestTube gives you access to cutting-edge experimental YouTube features

## Downloading videos, custom formats, only audio

There are many times you may wish to download a video from YouTube; a shared home video, a business resource or even some creative commons movie.

The simplest and fastest way is to use a third party website such as FullRip ([fullrip.net](http://fullrip.net)). The website uses JavaScript to download the video to your computer and needs an up-to-date Java version along with

on the level of quality you wish to download the file in from 32kbps to 320kbps. The audio download page also gives you a very useful ID3 tag editor so that the files are created with all the necessary metadata preloaded.

## Leanback and enjoy

(<https://www.youtube.com/tv>) This article very nearly missed its deadline due to the mind boggling addictiveness of YouTubeTV. Introduced under the

popular title of Leanback, it's simple – TV on the internet featuring not only premium content from studios and networks but also homemade content from across the globe. The feature uses your profile and viewership data to create an endless stream of content tailored to your tastes.

The elegant and user friendly design can be accessed on internet TVs, tablets and other mobile devices to provide seamless access to YouTube content. YouTube TV allows you to “leanback” and access content recommended for you or browse through various categories such as Comedy, Politics or simply try the Trends. The feature is best viewed on larger screens with a valid YouTube profile. The intention is to position YouTube TV as a reasonable alternative to normal television viewing.

## Discover music

(<http://www.youtube.com/disco>)

For those of us who love using YouTube as a music source, Disco offers a neat way to make automatic playlists for our favourite bands, artists and performers. Just enter the name, click “Disco!” and YouTube will take you to a top 100 playlist of songs. Just start and leave the music

hovering in the background.

## Speed up YouTube

([http://www.youtube.com/feather\\_beta](http://www.youtube.com/feather_beta))

Feather is one of the most recent additions by YouTube and is still in testing phases. The feature allows people with a shared internet connection or slower speeds in general to give them the fastest possible experience. YouTube accomplishes this by stripping away

its usual interface to the most basic options i.e. the video and limited browsing options. Sections such as recommendations, similar videos, comments and share options are not available at when using Feather. This reduces the latency on every watch page and streams videos faster. For people using 2G/3G hotspots or dongles, this version of YouTube can be a lifesaver.

## Bypassing regional restrictions

One of the trickiest costs of YouTube's popularity is the restricted availability of some of its content. Since many studios, production houses and brands use YouTube to spread their content on the internet they have imposed restrictions on who can access different content in different regions, this is called geofencing. Its not YouTube's decision but the decision of those who upload content. So if you want to watch content restricted in India some workarounds need to be used.

The first idea would be to set up a proxy server but that can prove challenging and odd for some people and situations. So the second, more easier step, is to use a plugin called Unblocker ([unblocker.yt](http://unblocker.yt)). This is a proxy-addon that requires no technical knowledge or settings to install. Just download, setup and you're good to stream. The third way of circumventing blocked YouTube videos is to simply download them and watch them offline.

## ADVANCED STEAM TRAINING

In the last 12 years since Steam came into existence it has become a name synonymous with the world of gaming in its entirety. Taking a step into the Steamworld, we published an article sometime back about lev-



FullRip is one of the best ways to download YouTube content

elling up on Steam. And maybe it's time we delve into the tweaks and added tricks that add to the convenience of being a part of the Steam community.

## Steam apprenticeship

Here are the basics from the 'The Zen of Steaming'. Aside from what third party sources have to offer, Steam has some built-in features to make your gaming lives convenient. Here are a few:

**Backup your games:** Despite the convenience of downloadable games, it's always more comforting to have a DVD or some kind of physical avatar of your games in case of a system breakdown. Unlike certain other game distributors, backing up the game files of Steam is an easy process. In your client, go to Steam>Backup and Restore Games>Backup currently installed programs, and let the Steam client do its thing. Follow the same steps to restore said backups when needed. Simple, convenient,

easy as pie. Remember, however, in case of a game update, you may need to create a new backup after deleting the old one, unless you intend to re-download from when you took your last backup.

To bypass this step entirely, there is the easier method of entering C:/Program Files (x86)/Steam/SteamApps/Common (replace the path with wherever you've installed Steam) and copying the game files directly. Any issues with missing files or file corruption during the transfer will be fixed by Steam when you replace these files into the same path later.

**Verify the integrity of the game cache:** Sometimes your games may crash regularly, or at a particular point in the game, or maybe even refuse to start up. Don't freak out. It's possible that your files have gotten corrupt, or even missing because you unintentionally deleted it. Simply right-click on the game in your steam library, select 'Properties' and enter the 'Local Files' tab. The 'Verify the integrity of the

game cache' button will fix most of these problems for you. Steam will recheck the files on your PC, and delete/re-download the problematic files.

## Outfox your Steam

If you're a Firefox fanboy and are a regular on Steam, look out for the Enhanced Steam add-on. The personalization options help add a little more to

add-on is that it's meant specifically for Firefox, so Chrome and Safari users are out of luck.

## Moving the files around

Yes, Steam has a backup option, but in situations when you want to change the location of all your Steam install files from one partition to the other, you need something like Steam Mover. Steam mover is a third



By pass regional restrictions using YouTube Unblocker

your Steam browser experience. You can change the tab colours of the website UI to change colours as per what you've already purchased, what's on your wishlist, and so on. Enhanced Steam also gives you the option to remove that annoying 'Install Steam' button that crops up at the top of your webpage, along with options to remove some of the other irritating aspects of the Steam page.

Getting it is a minute's job. Simply go to <http://dgit.in/enSteam> and click on 'Download now'. The only downside to this

party software. This software makes it much easier for you to transfer your entire Steam Library exactly the way it is from one location to the other. It creates junction points at the primary location to your selected secondary location. The biggest advantage of Steam Mover is that you can store copies of all your steam games on multiple drives without it hindering your ability to game on. Steam Mover makes it unnecessary to uninstalling and re-installing to make a sufficient amount of space on your pri-



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\*ASUS 1 Year Service Warranty average price is ₹2000 calculated.





mary drive to install that new 20GB game you want to play. The install file for the Steam Mover is easily available on <http://dgit.in/st3amvr>. The recommended instructions by the creator of the software can be found on <http://dgit.in/1p0BWcL> if you want to go through the process manually, using the command prompt.



## Release some of the pressure

With Steam's default sorting system, it's possible that those suffering from OCD may have an itch to sort games in the way they see fit. It's a personalization feature that Valve should consider incorporating in their client in future updates.

However, until then, there is always the Depressurizer. Depressurizer is a lightweight software that lets you organize the subheads in your Steam client to your own personal specifications. Download Depressurizer v0.4.4 from <http://dgit.in/depr3ss>. Post install, run the .exe file and input the default location of your Steam library. Depressurizer proceeds to pull out your game list. It then gives you the option to either reorganize the categories according to what you want them to appear or source the assigned game genres from Steam and

better-organized Steam library than the default interface.



## Clean up your act

Steam may be convenient, but it does tend to use up a lot of hard drive space with temporary files and unnecessary duplicate installer files. Tiki One Steam Cleaner is free tool that will scan your Steam folder for these files and give you an easily accessible way of removing them, letting you free up at least a gigabyte of space (on account of these files being around 90MB per game).

Tiki One is available at <http://dgit.in/tlklone>.

It's a good software that can keep things organised but there's a catch. If you need to run the "verify game cache" option for the game (as mentioned above) or even if the game updates very regularly, the Steam client will register these files as 'missing' and re-download them.

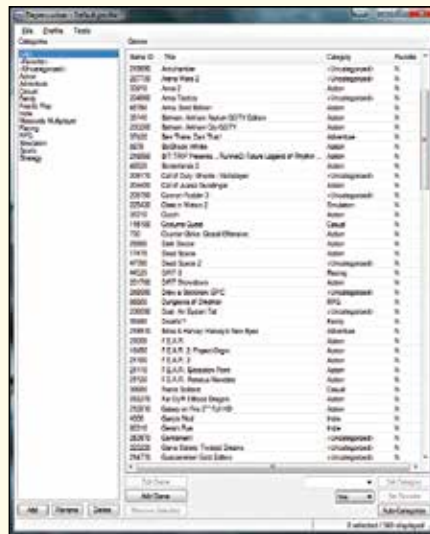


## Back up your backup

Yes, Steam has cloud synchronization, but those who've been gaming for years have to agree, there's nothing more self-scalping than losing saved games. Saved games are possibly more important than game backups. Backups can be re-downloaded in a matter of hours, but catching up to a game could take days, even weeks.

So once again, for those who prefer the safety net of localized backed up content, there is a way to save your game saves on a local storage device.

SaveGameBackup (the programmer earns no points for creativity) is an application



Depressurizer v0.4.4

that can be used to conveniently backup and restore not just your Steam saved games, but also the saved game files of any game installed on your system. Download the setup from <http://dgit.in/sgbckup> and follow the instructions.



## Of gauges and bundles

Steam Gauge (<http://dgit.in/mysgauge>) is an interesting website that compiles the basic stats of your Steam usage like Hours played, games owned and the total worth of your entire library. This is very effective for people who suffer from digital shopaholism. If required, take a screenshot and save it as your wallpaper to constantly remind you of why you need to stop spending money on games.

Or simply revert to online game bundles.

Yes, there are cheaper ways to obtain original Steam games outside the Steam seasonal sales.

Most of you have already probably figured that out, by now. But for the naive – wake up and smell the scent of cheaply obtained original games!

Humble Bundle (<http://www.humblebundle.com/>) and Bundle Stars (<http://www.bundlestars.com/>) are two such websites you can visit. Keep a tab on websites

like 'Is there any deal?' (<http://isthereanydeal.com/>) which keep tabs on the gaming websites and bundle sites that support Steam-based games and post about deals consistently.

'Is there any deal?' goes to the extent of syncing with your Steam account and informs you when there's a game on your wishlist up for sale (along with the all-time lowest rates, so that you know how good the deal actually is).

Keep the above little tricks in mind on the road to becoming a Steam Jedi. May the vaporous Force be with you, young Padawan.

## FACEBOOK PAPER

Facebook's default app has been a mobile mainstay for many years and now finally, after so many years, Facebook has come out with what could very well be the replacement we've all been waiting for. As it stands, Paper is somewhat of an experiment at the moment and is only available in the U.S. iTunes store, which makes it a little harder to try out here, in India.



## Installing Paper

As mentioned earlier, Paper is only available on the U.S. iTunes store but fear not, getting Paper on your phone is simple enough and we'll take you through the process step-by-step. Note that if you have an existing iTunes account and there are some payments pending, you will not be able to create an account. Also note that any subscriptions that you may have might get discontinued as well.

- Download and install the latest version of iTunes from the Digit DVD or from <http://dgit.in/1gVF3yY>
- If you don't already have an iTunes account, create one by clicking the "Sign in" button in iTunes.



Enhanced Steam on Firefox

organize them according to that. As the image shows, it does it quite well, overall. Some micro-management may be required, but it still leaves you with a much



Accessing the settings menu

- Ignore this step if you already have an iTunes account. Follow the instructions up to create an account, which are pretty straight-forward. If you're creating a new account, you will need to provide payment details (an Indian Credit Card). This is for verification purposes, so for now, create an account with legitimate payment information and an address that's located in India (since you'll be using an Indian Credit Card).
- Verify your account and maybe purchase a few apps on the store (free ones will

do). After verification is complete, you'll need to edit account details.

- Sign into iTunes with your Apple ID, click on your account ID and then click on "Account". Set your location as the United States and then click on "Edit Payment Information".
- If your account has been verified, you should see an option under Payment Type that says "None".
- Update your address with a U.S. address. If you don't have a U.S. address handy, here's a quick tip, just search for a McDonalds or some such popular destination on Google maps. This will get you an address as well as a phone number that you can use for your account and click save.

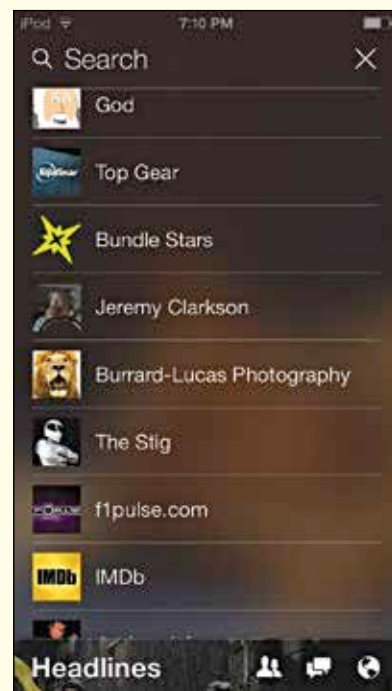
If everything's gone according to plan, you should now have an Apple account that's registered to the U.S. iTunes store. Just head over to the App Store and download Paper, as a bonus, you will now have access to iTunes Radio as well.



## Using Paper

Once installed, the app is quick to launch and set itself up. If your Facebook details are already stored on your iPod or iPhone, the app will pick them up and log you in directly.

- Watch the intro video and assimilate the tips that the app gives you as they do a fairly good job of comprehensively covering every feature that you'd normally use.
- There's one simple rule of thumb for Paper (that makes more sense than you realize as you only need your thumb to navigate the app). Swipe up to go deeper into a story, swiped down to get out and swipe left or right to browse through sections and stories.
- Long stories that link to webpages can be a little hard to get out of as you would normally have to scroll all the way to the top to minimize the page. But that little niggle has been taken care of, just swipe down once and you'll see a translucent arrow appear at the top of the screen (much like the arrow for the notification centre) and just tap it to minimize.
- Swiping up in a story will also give you access to the share button, which will allow you to directly share the story and even open it in Safari or save it in same Pocket style app.
- Swipe down on the main screen to access profile info,



This is how you get to your subscriptions

create a post and edit sections and settings.

You can use settings to setup a read later app of your choice. Account settings and other miscellaneous options are also available here.

- Access to your groups and pages might seem non-existent, but don't panic. Swipe down on Paper's home screen and tap on the three lines on the top right corner of the screen, all your groups and pages will be listed. To search, just tap the search button on the top left of the same screen. **1**

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**WhatsApp outage**

A few days after the \$19 billion mega buyout was announced, WhatsApp experienced an outage caused by a router apparently. Details: <http://dgit.in/wappout>

**First 5TB external drive**

Storage device manufacturer - Lacie, recently announced a 5TB, 7200 RPM hard drive which would be available in a single shell

# Smart Ways

to improve your productivity using technology

There's always scope to do more stuff, do it quicker and more efficiently.

Tanmay Patange

[readersletters@thinkdigit.com](mailto:readersletters@thinkdigit.com)

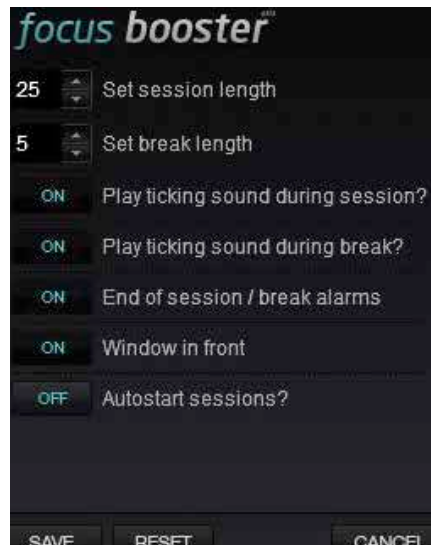
**G**oofing off is something we've all been guilty of at some point or the other. Keeping track of deadlines, remembering stuff to do, staying focused, streamlining activities and cutting out distractions can go a long way in making you productive and organised again. The tools, tips and tech-assisted methods we feature below will help simplify and improve your life.

## 1 Stay focused!

Staying focused on the task at hand pushes you a step closer towards its accomplishment. You could be a champion at multitasking, nevertheless, this isn't without its disadvantages and chances are high that mistakes may creep in. Say you're completing a project at office while simultaneously making fun of your boss on Twitter (if you're lucky enough to not have it blocked at work or have your activities monitored). Imagine the consequences if you mixed up the tasks!

### Focus Booster

Focus Booster is a widget-like desktop-based timer application based on the 'pomodoro' technique – a time management method developed by Francesco Cirillo in the late 1980s – which estimates that we're most productive when we work in intervals traditionally lasting 25 minutes in length, separated by short breaks. These timed blocks are known as 'pomodoros'. The app has a narrow looking rectangular interface that holds a counter set



Focus your energies on the task at hand by working in sessions using this app

to 25 minutes, ready to play. A small "i" on the interface brings up a pop up with options that let you set up the session, choose the break length, activate sounds and select an "always-on-top" option. However, it's not possible for you to enjoy breaks lasting more than five minutes. Upon clicking the play button, the countdown begins with a brief stopwatch-like sound and displays "Session 01" on the screen. When the first session ends, an alarm bell notifies you that it's break time at the end of which the next session begins automatically. Download Focus Booster: <http://dgit.in/focusboosterapp>

## 2 Do things on time

Do the number of tasks you need to perform overwhelm you, making you forget some of the important tasks

in that list, or god forbid, a deadline? This happens due to unorganised to-do lists. Here are some tools to the rescue:

### Todo.ly

Earlier, working on different tasks and projects simultaneously was a tough ordeal. Today, we have Todo.ly. This online web application has several features, which help you organise your tasks efficiently. By using Todo.ly, you can not only create tasks and projects, but also move the tasks into the existing projects. All you need to do is create/assign tasks to the desired dates, and as the deadline approaches, tasks will start popping up in your "Today" list. Therefore, you can't easily forget or run away from your tasks. Additionally, its several filters let you set reminder emails to be delivered right into your inbox for any task. It's available as a web application accessible right from your web browser and as an iOS app. Todo.ly can be downloaded at: <http://todo.ly/>. iOS users, download Todo.ly from the iTunes store at: <http://dgit.in/todolyios>

### Any.do

Unlike Todo.ly, Any.do is designed to work across mobile devices and on computers with Chrome installed. Available as an Android/iOS app and as a Chrome extension, Any.do synchronises your tasks on all platforms that have the app installed. On Any.do, you can drag and drop your tasks and to-dos within the app's interface, or attach notes to any existing task. Additionally, if you're using the Chrome extension, you'll get a new "Remind Me"

## Beyond cats

Buzzfeed once a lol cat heaven, says its reinventing itself by moving into serious journalism. Will the strategy work? Full report here: <http://dgit.in/buzzfid>



## Phoenix Rises

CS:GO Operation Phoenix launches with 8 fan-selected maps to be played. Take a look: <http://dgit.in/csgophoenix>

Workshop

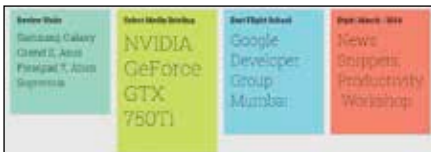
drop-down box, that allows you to maintain and organise your to-do list from right within your Gmail inbox. Download Android: <http://dgit.in/anydoandroid> | iOS: <http://dgit.in/anydoiosapp> | Chrome: <http://dgit.in/anydochrome>

## 3 Start taking notes

Note-taking generally helps maintain record of any sort of information you may later want to retrieve. It's the easiest way to capture resources and recall them whenever you want.

### Sticky Notes

No shame using a mainstream option. If you have Home Premium, Professional or Ultimate edition of Windows you're probably already using the default Sticky Notes app. If not, to start using Sticky Notes, go to [Win] > All Programs > Accessories > Sticky Notes.



Now creating notes is as easy as turning on your PC

### Google Keep

This is a simple to use app, available for mobiles and PCs. The best part about Google Keep is that all your created notes, lists and photos are automatically stored in your Google Drive cloud storage. If you already have a Google account, you can begin to use Google Keep immediately. Visit: <http://drive.google.com/keep>

## 4 Prepare your calendar

Time – we can't stop it, but we can surely manage it. To do this you'll want tools that will allow you to have a bird's-eye view of your entire month/week at a quick glance.

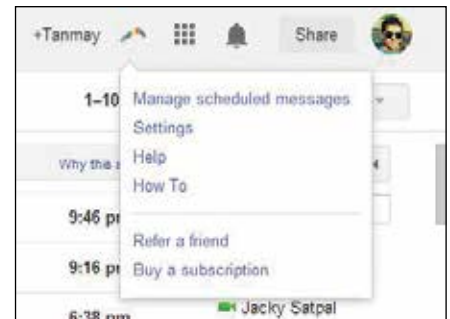
### Google Calendar

Anyone with a Google account can use Google Calendar. It allows users to set up customisable reminders, send invitations for the events created within the app itself, and track RSVPs. Google Calendar helps you easily create and monitor your schedule, and share it with other Calendar users. The service is available for use within browsers as well as mobiles. Go to [www.google.com/calendar](http://www.google.com/calendar) and sign in to your Google account. Once you're logged in, you can proceed towards creating an event. It is a very simple process. Simply click on the day when your event will be taking place. Enter the necessary details i.e. event name, venue, date/time etc. Once event creation is done, publish the event to your calendar immediately. You can also edit the existing event details and add information anytime you want. Additionally, you can set up SMS/email reminders, or enable/disable event notifications. Download Google Calendar for Android from: <http://dgit.in/google-calendarandroid>

## 5 Manage your email

No matter what you use email for, you'll always need to ensure its proper management. It includes replying to emails as soon as they arrive, sending those unwanted emails to the trash folder

or even marking those "Congratulations! You have won \$99999999!" emails as spam. The two options below will help you do just that.



Schedule your emails to be sent or returned whenever you want

### Gmail labels

Who among us doesn't use Gmail? It's safe to assume that most of us do. And if you're like us, you've probably subscribed to more than just a few mailing lists. However, over time, these lists can get out of control. Wouldn't it be nice if you could organise your emails by topic, so that you could later easily find them without any inconvenience? Gmail labels can help you with this allowing you to easily sort/organise emails by topic and source. Once you're signed in to Gmail, click on "More" in the left-hand pane. There you'll see options for managing and creating labels below the usual folders. Say you create a label named "Online Transactions". After completing an online transaction on Flipkart or Amazon, you'll receive an email containing your receipt and details. You can mark this email with the "Online Transaction" label. Thereafter, if you ever

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## Google's wearable

LG is reportedly designing Google's new smartwatch to be launched at IO 2014  
<http://dgit.in/gglwtwh>



## Return of us

Naughty Dog's highly acclaimed 'Last of Us' may be coming back for seconds. Take a look:  
<http://dgit.in/lofuseq>

need to refer to that receipt, all you have to do is look under this label on the left-hand pane. In the same way, you can create other labels depending on how you want to categorise your emails.

## Boomerang

Boomerang is a browser plug-in that gives you the ability to schedule messages to be sent right from your Gmail account. It also sends you follow-up reminders, viz reminders in case you don't hear back from your email recipients. Let's say you want to wish your friend on his/her birthday at 12 midnight and you've started feeling sleepy, simply write your message now, and schedule it to be sent at midnight. The app even prompts you to schedule reminders related to each email you receive. Download and install Boomerang on your web browser. It works well with Chrome, Safari and Firefox. Go to: <http://dgit.in/downloadboomerang>

## 6 Collaborate on to-do lists

Here's an app that will help you build and maintain a list of tasks for each project you're working on in collaboration with others in your team.



The 'boards' feature in Trello will help you organise the to-do tasks in each of your projects

## Trello

Are you a project manager in your company, or simply working on some project under the project manager? Well, you should consider using Trello. An online tool that helps you organise your projects collaboratively, Trello is designed to help you understand the requirements of your project. It even helps you understand which of your team members is working on what task, or what does the process of completing the project involve. All of your

project tasks and team member's details are easily visible in the app's interface. You can even plan company events or recruit people for the project. Download Trello: Android: <http://dgit.in/trelloandroid> | iOS: <http://dgit.in/trelloios> | Windows 8: <http://dgit.in/1fwAg2P> | Web browsers: <http://trello.com>.

## 7 Synchronise your world

Synchronisation, abbreviated as "Sync" is nothing but a process that maintains an integrity between two or more resources concurrently. In computer science, the term means process and data synchronisation, which is further divided into file synchronisation, cache coherency, database replication etc.

## Google Sync

Google offers you the ability to sync some of Google's services such as Gmail, Chrome, Calendar, and Contacts on all your devices. There's always a possibility that you might be using these services on multiple devices such as your phone, tablet and desktop. Syncing allows all of your data and information on these devices to always be up-to-date. For

instance, using this feature, all your emails will be automatically synced with all your devices running Gmail. Similarly, syncing your contact list with your Google account will make it available on all your devices. Let's say you have a Nexus 5 and all your contacts are synced with the device. In case you get a new Moto G, you'll automatically have all your old contacts on this new

device upon signing in to your Google account. Interestingly, browser syncing is one of the most useful practices if you want a faster and more efficient browser. Let's say you have a Google Chrome browser running on your desktop, and you're signed in using your Google account. Your entire browser history and settings will have already been synced with your account. Now if you decide to use Chrome on your phone, you'll have the same settings available. Even if you

have some tabs opened on your desktop Chrome, you'll find them open in the Chrome app on your mobile also.

## 8 Stop wasting your time

Do you have any idea how much precious time you waste playing games on Facebook? You might say an hour or so. But you're probably lying to yourself. Let the below plug-in give you a reality check.

## TimeStats

TimeStats is a web browser plug-in for Google Chrome that accurately calculates and displays the amount of time you spend online. Easy to access right inside your browser, it provides you a daily, weekly and even monthly statistical report of your internet usage. For a more customised feeling, it lets you categorise and rename websites you visit. Install TimeStats on Google Chrome: <http://dgit.in/timestats>

## 9 Take a break

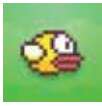
Regular breaks from mental tasks have been found to improve productivity and creativity. In fact working without breaks can result in stress and exhaustion. Here are some ideas for things to do during your breaks. Don't forget to use the Focus Booster timer app to remind you to get back to work.

## Grooveshark

Even if you're not a music lover, you'll still enjoy listening to songs on Grooveshark. The free online radio streaming service has a huge database consisting of songs, albums and artists from around the world. Tune in to <http://grooveshark.com/>

## Last.fm Buggles

A new lab feature from Last.fm, Buggles is the best way to listen to and discover music online. If you're someone who likes to listen to music while working you'd know how irritating it can be to keep selecting songs, queuing them and creating playlists. Last.fm solves all that and lets you listen to classic Last.fm radio stations but with YouTube music videos. Head over to <http://www.last.fm/labs/buggles> to enable the feature.



## Flappy Bird grounded

The popular (and frustratingly difficult) game for mobile devices was down by its creator for being too addictive apparently.

## The future of laser communication

NASA's JPL and the National Institute of Standards and Technology are pushing laser communication to its edge. Read how: <http://dgit.in/M5ES8d>

Workshop



# Password management

Outsource this painful task to one of these nifty tools

Jayesh Shinde

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**T**he instant you see a sign up button, some of your brain cells die for good. Gone, never to return. In this age of information overload, the last thing you need to cram into that fast depleting memory of yours is another username and password combo for yet another website. Experience and good online etiquette has taught us not to use one blanket password for all websites, because it leaves not only that account but your entire online identity vulnerable to attack.

What's the way out? Broadly you can use two methods viz. A cloud-based password manager software or a pendrive based one. When you start hitting the "Forgot password" link too often you'll see sense in opting for either of these methods. Let's look at cloud based password managers first.

**LastPass:** Rated by several prominent websites as the best password manager out there, LastPass is the easiest way to create unique passwords for each website

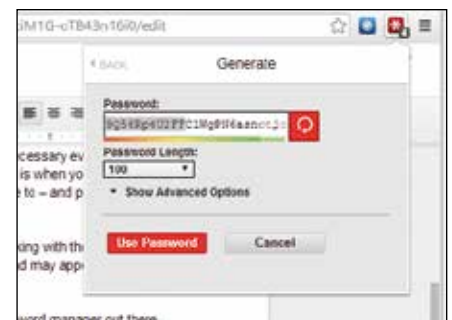
you visit, sync them securely online in an encrypted password vault, and easily fill in login forms through LastPass' automated feature. All you have to remember is just one master password to your LastPass account.

Before creating your LastPass account, download their local installer on your Mac, Linux or Windows PC and then start the signup process. Once you finish with it, install the browser extension of your choice, and log into LastPass' browser extension.

From here, if you want to save the login credentials of an existing account on a website, simply visit its URL, click on the LastPass extension on your browser's extension bar, and enter the legitimate login details for the website yourself in the Fill form drop-down. Alternatively, if you don't have a login for the particular page, you can ask LastPass to generate one (defining the character limit yourself), and saving it for good. Either ways, every time you revisit the page, you can enter your login details with just a click. Just look for the asterisk LastPass highlighter in the data fields,

hinting you that LastPass is ready to enter data on your command. Neat, eh?

**1Password:** This is a paid password management service, very similar to LastPass. It's better designed than LastPass or KeePass, and aimed primarily at Mac users (although now the service is cross-platform supporting Android, Windows, and iOS platforms).



LastPass even generates passwords

It works the same way as KeePass, for example, where immediately after installing the program on your machine, you have to assign a save location to its database file – an encrypted file which safely

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ASUS recommends Windows 8.







## PasswordBox: Download now!

A free password manager that allows users to securely store, retrieve and sync passwords and other personal data anytime, anywhere, on any device <http://dgit.in/dpwdbox>

## Inside Google Earth

What does Google Earth's space clicker look like? Here's an inside look at the observatory where the magic happens: <http://dgit.in/1j3mkBE>

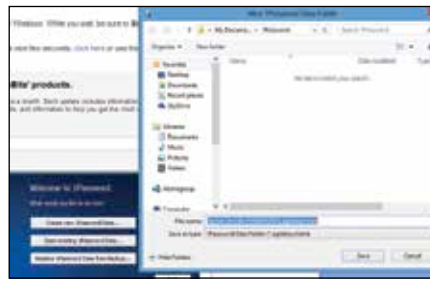
stores all your login and passwords generated through 1Password directly on your PC or Mac. This database file can be easily synced using services like Dropbox, Box.com, or Google Drive in case you want to keep using 1Password through multiple devices, either at work or home. Just ensure that whatever master password you set for accessing the database file is long, strong and difficult to guess, as this will also be the same password that you enter into 1Password's browser extension.

Next step is obviously to open the 1Password vault and install a browser plugin of your choice. While logging into the browser plugin of 1Password, you'll have to enter the same master password you used to encrypt your database file with. Once you get past the login section of the browser plugin, you'll identify it with a key icon on your browser's taskbar.

Whenever you enter the username and password for a new website, 1Password gives you a visual cue at the top of the browser page whether you want to save the login credentials in your database. If you click yes, immediately the credentials are synced with 1Password's program and database file.

The tool also supports the creation of multiple password vaults to share with family members or coworkers. Create extra vaults, copy items to them, and just click share. This is for now a Mac-only feature, but it's slated to arrive on other platforms very soon. Here's how you create and share vaults.

- Create a new vault (1Password > New Vault...)
- Customize its icon, color, and Master Password (you can even use photos from your Mac!)
- Copy some items to this new secondary vault (select any item, click the sharing arrow and choose your new vault as the destination)
- Place the vault in a shared Dropbox folder or other location (1Password > Preferences > Sync)
- Have your family members or coworkers use 1Password 4 for Mac to add your new vault
- Enjoy 1Password's new Shared Vault awesomeness



Creating a new 1Password database

**KeePass:** This is a free, lightweight, robust, open source and cross-platform password management utility that does not offer all the features offered by LastPass or 1Password, but it covers all the bases effectively to make it a lucrative tool to use. You can put all your passwords in one database, which is locked with one master key or a key file. So you only have to remember one single master password or select the key file to unlock the whole database.

It's largely similar to 1Password, but because it's open source, KeePass isn't as easy to use as other applications straight after downloading and takes some getting used to. It's built for Windows, so it involves getting your hands dirty with add-ons if you want it to run on anything else. But therein lies its unique appeal. You exert complete control over every aspect of the tool and your experience, which is not a claim that 1Password or LastPass can't entirely make. Once you create a master password and link it to a database file (.kdbx), and use the same password to login through a browser plugin (like ChromeIPass), you effectively follow the exact same process like iPassword's to fill in passwords while visiting websites.

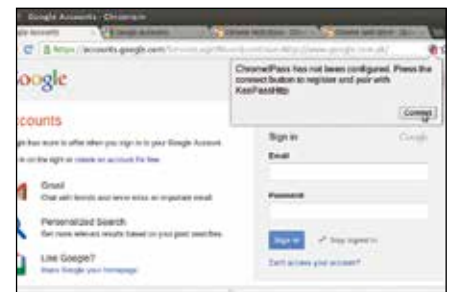
And remember to always keep the database synced using cloud syncing services to have the database file at hand whenever you need it. As long as you don't lose this file or forget its master password, you'll always have access to your passwords and logins – even if this file is stolen or falls into wrong hands, the effectiveness of its master password and its encrypted nature will ensure that no one can ever decipher your passwords.

### Use a pen drive for password management

Services like KeePass and 1Password can

be used in conjunction with a hardware key – like a USB pen drive – to fundamentally alter how you memorise and save passwords in your head or on a database file. A company called Yubico is in the business of making USB keys which are nothing but on-ground, hardware one-time-password generators and authenticators. Using a Yubico USB password key lets you “hold” a password (much like a door key) and relieves you from the burden of “thinking” a password to store. It's an important distinction that one must understand.

A \$25 Yubico key (or Yubikey) works much like a standard door key to gain access to your password vault in 1Password or KeyPass, and both utilities recognize and support the device. Yubikeys operate in two modes: static and OTP. In static password mode, Yubikeys can enter a very strong password to pair with your 1Password or KeePass login (without the need of Internet, too). Follow these steps for KeePass:



### Use the KeePass chrome extension

- When creating a new KeePass database (main menu: File > New) or changing the master key of an existing database (main menu: File > Change Master Key), first make sure that in the key dialog the input focus is currently in the master password field (marked red on the screenshot on the right).
- Then insert your YubiKey and press its button. YubiKey will enter a strong password for you.
- After successfully changing the key, don't forget to save the database to apply the new key.

There's a catch here: now the onus is on you to not lose the Yubikey, as long as you need to keep using KeePass and 1Password's DB file made with Yubikey's hardware authentication.

# Olympics' Herculean tech feats

**T**he Summer Olympics have always been a refresher course to encounter new sports and marvel at athletes' superhuman, chiseled physiques on a quadrennial basis. This was before I knew that something like the Winter Olympics existed, of course. But soon enough, I was enamored by sights and scenes of snowcapped resorts, with plenty of skis, skateboards and matching apparels and too many picture-perfect postcard moments to keep track off. It was a bit hard to imagine and thus, something like the Winter Games held at Sochi, Russia, seemed to be nothing more than the greatest paid vacation for athletes from all over the world – but of course, that's not the case. The competition's as serious as it can be and there're so many events to track.

Not only do you get introduced to sporting disciplines you never knew existed, but also to technologies that help adjudicate, connect, and literally run the show. It's a massive undertaking, figuring out the tech to conduct and operate an event of the scale which experts are calling the most technologically advanced ever – with tens of thousands of athletes, support staff, organizers and the general public in attendance. Take for instance the network deployed by Avaya which provides a 54 Tbps backbone shared by four data centres, two media centres and 11 sporting venues. Internet providers at Sochi were transporting between 1-2 TB of data to and fro every single day.

Photography broke new ground at the Sochi olympics, too, given Getty Images' exhibits at the show. Apart from top-notch 360-degree panoramic images of every sports venue, remotely triggered photographic cameras and even prototype cameras from the major manufacturers were used. All this to bring you fantastic images and photo-essays to make a lasting impression.

High-speed motion photography's great strides are also evident in Omega's official timekeeping apparatus installed at Sochi, and other prominent athletic events around the world. Preparations start two years in advance with camera installations and fibre optic cabling, leading to several months of testing the systems before showtime. Why? To catch differences of 0.003 seconds to separate the winner from second place, as it happened in a speed skate event. Mind boggling stuff.

Previously unseen security measures were deployed at Sochi as well. A system known as

Vibralmage "uses computer analytics of live video images to measure tiny muscle vibrations in the head and neck," according to NYT. It is designed to "detect someone who appears unremarkable but whose agitated mental state signals an imminent terrorist threat." Artec ID's Broadway 3D Face Recognition System at Sochi was "capable of identifying a person on the walk, it could also tell apart identical twins." There were military drones in the air, deep packet inspection of all incoming and outgoing communication from Sochi and more. What could possibly go wrong? It's Russia after all.

The athletes were also equipped with cutting edge tech. Take the kevlar and carbon fibre bobsled developed by BMW for Team USA, it's unlike anything you've ever seen. Speed skater Shani Davis' high-performance suit took more than two years to create in a research lab and is made from different fabrics including nylon, polyester, and spandex, to help minimize friction down to infinitesimal levels – all thanks to chemistry. There were Nike's padded boots with a futuristic cushioning layer developed by observing astronauts jump on the moon, vibration damping skis made of carbon nano-tubes, socks that were strong enough to be used in a bulletproof vests and so much more!

All these tech feats have helped me appreciate the nuances of this year's Winter Games. Thanks to the cutting edge behind-the-scenes tech and consumerization of smart gadgets, the athletes have never been more accessible, the coverage never more breathtaking, or the security never so water-tight. Of course, Putin and Russia had a lot to do with it – after all, they stockpiled several million cubic feet of snow for the Sochi games, according to reports, and deployed over 400 snow cannons to layer the slopes with manmade snow (just in case). But jest aside, tech deployed at these international sporting events has the potential to reveal more than what the annual CES, CeBIT or Computex have to showcase.

Lesson learnt: expect the unexpected at the FIFA World Cup later this year.



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**"It's a massive undertaking, figuring out the tech to conduct and operate a sporting event of the scale which experts are calling the most technologically advanced ever."**



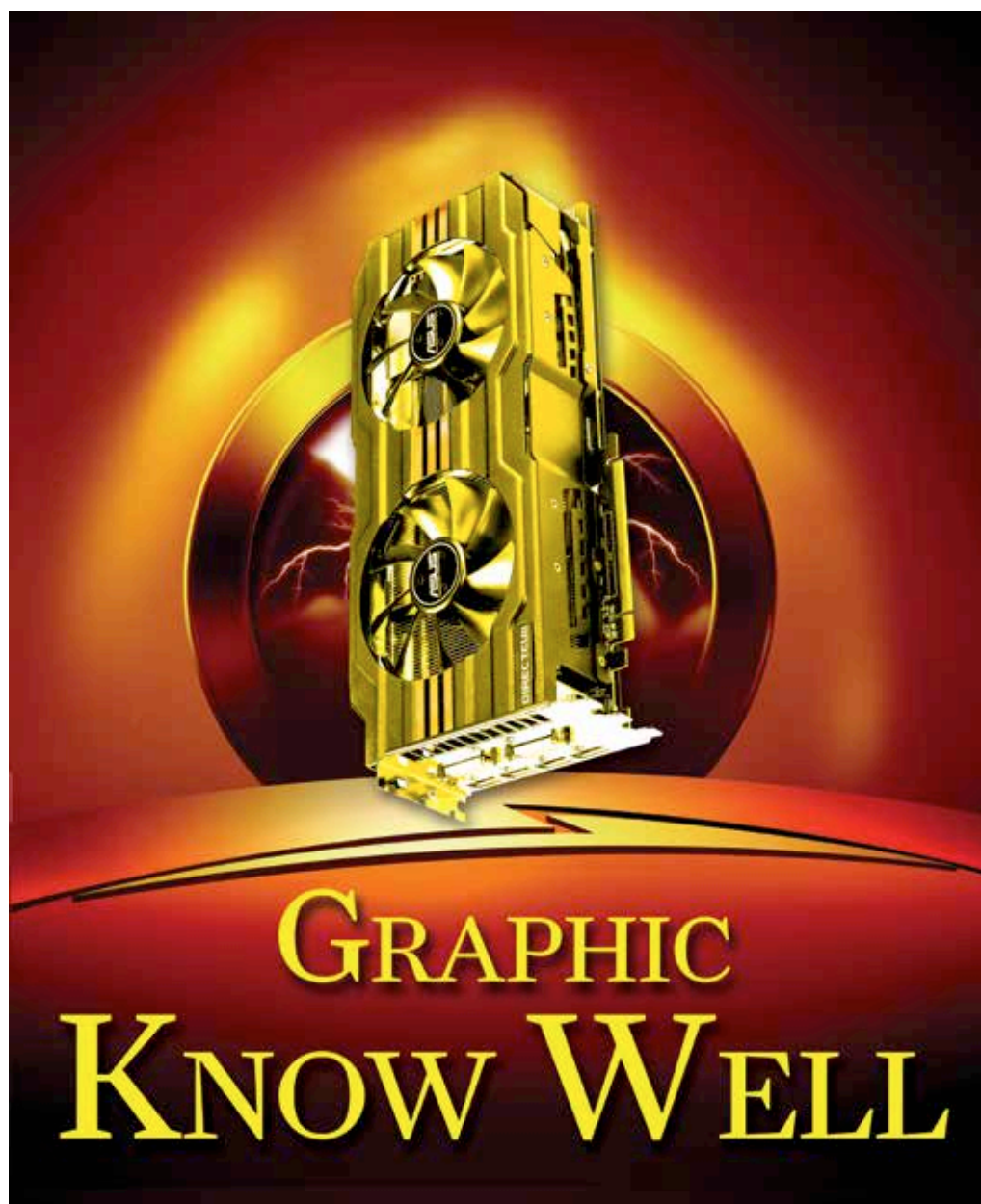
## An LG Smartwatch?

The head of LG's mobile unit has mentioned that they might release a smartwatch sometime this year <http://dgit.in/LGSmartwatch>



## Gear 2 and Gear 2 Neo

Samsung unveiled two new smartwatches that feature a newly developed operating system instead of android <http://dgit.in/SamsungGear2>



IMAGING: VIJAY PADAYA

If the budget for your next graphics card lies between ₹5,000 to ₹25,000 then we've got you covered.

Mithun Mohandas  
[readersletters@thinkdigit.com](mailto:readersletters@thinkdigit.com)

Over the last one year we've seen the NVIDIA's 600 series and AMD HD 7000 series get retired.

Well not really, in the world of silicon we have the same thing shoveled to us after a simple rebadging exercise. This is to mean that the NVIDIA 600 series and AMD HD 7000 series is still around, but they now have new names with

minor or negligible architectural improvements. Especially the mobile graphics hardware segment which has to make do with "ancient" technology since that space operates roughly two generations behind. The very premier laptops might have a

generation old graphics chip while the rest are way behind.

On-chip graphics has also advanced quite well. Intel's latest, dubbed Iris Pro is actually quite a capable graphics chip and has a TDP of 47W. We could possibly see a little stagnation in the TDP of processors due to this fact before it continues the downward trend in processor TDP. However, discrete graphics solutions from NVIDIA and AMD are way ahead of the curve and we can now experience desktop style graphics on laptops as well. Though not all features of a full fledged GTX 760 or R9 270X can be surpassed any time soon, the new Maxwell architecture does show promise.

## What's new in the graphics world?

AMD started off with a brand new architecture - Hawaii. There are only two cards which are truly based on the Hawaii chipset, viz. the R9 290 and the R9 290X. Both have been particularly well received and perform quite well. The R9 290X outperformed the GTX Titan but the GTX 780 Ti which was released around the same time didn't let AMD get away with the throne. It was a rather short victory. Along with the GCN (Graphics Core Next) architecture AMD also released information regarding Mantle, an API set to occupy the same space as DirectX. While visually there isn't much that can be said to differentiate between the two, Mantle's performance is better than DirectX since it gives direct access to the GPU memory resulting in low latency and faster calculations.

That wasn't the only change, as even the nomenclature of the cards were changed and another equally difficult to

## Opera Max beta

Opera launches beta version of Max, an android app for data saving using compression  
[http://dgit.in/Opera\\_Max](http://dgit.in/Opera_Max)



## GSLV Mk.III launch soon

An experimental launch of the new launch vehicle will take place in May or June  
<http://dgit.in/1ceeMaf>

GPU Test

comprehend system was put into place. The Radeon HD 7XXX style was replaced with the RX 2XX style.

At the NVIDIA camp, they recently launched the Maxwell line which happens to be the next iteration. However, they didn't start it off with a new series, rather it was incorporated in the 700 series itself as the GTX 750 and the GTX 750 Ti. Architecturally, it is a rearrangement of the Kepler die which has resulted in the ability to squeeze more streaming multiprocessors (SMs) in roughly the same surface area. The resulting chip has 2.5 times the number of SMs in 25% extra die surface area.

The GTX 750 and GTX 750 Ti are also comparatively energy efficient and don't require any external power supply. While this is true, the extent of the efficiency has come under question. The cards that we tested had one other

GTX 750 Ti than the reference card and surprisingly they performed at the same level. The only difference was that the reference card ran purely off the PCIe port while the ZOTAC card with an aftermarket cooler performed at the exact same level and had similar temperatures while utilising a six pin power supply connector. The difference seems to be the beefier cooler which needs the extra power, almost all manufacturers with aftermarket coolers have a requirement for the external six pin power supply. This is counterproductive since this particular card was designed so that people can have a decently performing card without having to change their power supplies.

### The competitors

This year we had plenty of cards in the test. Since the upper margin was fixed at ₹25,000 the spectrum of cards



GTX 750 Ti – the first Maxwell card

that came in for testing even included the flagship cards of the previous generation and they did manage to steal the show. Read on further to know the details.

The lowest current gen SKU that had a NVIDIA chip was the GTX 750 Ti and that wasn't even a low end card. The series ended with the MSI N770 TF which is a factory overclocked GTX 770 with a custom cooling solution. On AMD's side we saw cards that started with the

low end R7 240 and went all the way to the R9 280X. Both competitors had plenty of cards in the test and since the range spread from the entry-level to the high-end cards it was unfair to have all these cards compared against each other on equal footing considering that the usage scenarios for all of them are different. With this in mind we broke down the comparison test into three categories based on the pricing. The first category should be considered if

### Competing cards



The cards that had NVIDIA chips were comprised of current as well as the previous generation of GPUs. We couldn't manage to get the GTX 750 which came out with the 750 Ti and that would've presented a more complete comparison.



The cards with AMD chips were all older generation technology. The R9 280X which is the closest you can get to a new generation happens to be based on the older gen Tahiti chip which powered the HD7970.

GT 640  
GTX 650 Ti  
GTX 750 Ti  
GTX 770

GTX 650  
GTX 660  
GTX 760

R7 240  
R7 260  
HD 7850  
R9 270X

R7 250  
R7 260X  
R9 270  
R9 280X

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## ZFS on Linux

Here's a tutorial on how to use the all new and powerful ZFS file system on linux  
<http://dgit.in/ZFSLinux>



## Strongest solar flare

NASA's IRIS witnesses the strongest solar flare ever since its launch last year  
<http://dgit.in/NASAIris>

		BELOW ₹10,000					ABOVE ₹10,000				
Brand		XFX	Galaxy	XFX	Galaxy	Galaxy	XFX	ASUS	ASUS	NVIDIA	
Model		R7 240	GT 640	R7 250	GTX 650	650 Ti	R7 260X	R7 260	GTX 650Ti DC20C	GTX 750Ti	
											
Price (in Rupees)		4,950	6,200	6,475	7,335	9,715	10,675	11,500	11,000	11,990	
Performance		45	48	52	52	59	64	62	65	66	
Value for money		90	76	79	70	60	90	81	89	83	
Build quality		60	60	60	60	60	60	60	60	60	
Warranty		Lifetime	Lifetime	Lifetime	Lifetime	Lifetime	Lifetime	3	3	Reference	
Features											
Chipset		Oland	GK107	Oland	GK107	GK106	Bonaire	Bonaire	GK106	GM107	
Core Clock (MHz)		780	902	1050	1059	967	1075	1000	1020	1020	
Memory Clock (MHz)		800	891	1150	1250	1350	1600	1500	1502	1350	
Stream processors/ Shaders		320	384	384	384	768	896	768	768	640	
Texture Units		20	32	24	32	64	56	48	64	40	
ROPs		8	16	8	16	16	16	16	24	16	
Memory (MB)		2048	2048	1024	1024	1024	2048	1024	2048	2048	
Ports - VGA/DVI/HDMI Mini-HDMI/DP/Mini-DP		Y/Y/Y N/N/N	Y/Y/Y N/N/N	Y/Y/Y N/N/N	Y/Y/Y N/N/N	N/2xY/Y Y/N/N	N/2xY/Y N/Y/N	N/Y/Y N/Y/N	N/2xY/Y N/Y/N	N/2xY/N Y/N/N	
External Power		-	-	-	-	6PIN	6PIN	6PIN	6PIN	-	
Synthetic											
3D Mark											
Fire Strike	Score	1118	1497	2053	2102	3180	3675	3433	4043	3941	
	Graphics	1165	1549	2128	2144	3306	3940	3636	4227	4125	
	Physics	13997	14100	13997	14056	14066	13997	13954	14111	14090	
Physical											
Temperature	Idle	36	31	41	30	36	38	35	37	37	
	Load	58	46	61	51	51	61	68	65	61	
Games (FPS)											
Bioshock Infinite	Ultra	10.16	16.82	20.34	26.04	38.62	35.76	32.75	47.12	48.79	
	Medium	22.11	31.4	41.87	46.72	71.6	75.28	69.02	89.46	82.94	
	Low	26.8	39.22	52.27	58.88	88.27	92.61	86.29	110.33	107.49	
Tomb Raider	Ultra	7.3	10.8	13.2	15.5	25.4	26.4	23.7	31.8	29.4	
	Medium	20.9	36.9	41.2	53.9	85.6	73.2	68.3	107	100.2	
	Low	28.4	50.2	58.3	72	117.2	102.5	96.2	143.3	148.1	
Hitman Absolution	Ultra	4.1	4.9	7.4	8.8	11	12.8	7.3	16.1	15.2	
	Medium	13.9	16.1	29.1	29.8	37	48.9	47.5	52.4	45.2	
	Low	23.7	27.5	46.5	43.9	60.4	81	77.9	80.2	77.6	
Sleeping Dogs	Ultra	6.5	7.6	12	10.8	19.3	23.4	21	25.4	22	
	Medium	35.9	45.8	67.1	69.4	103.5	119.7	112.4	128.4	121.2	
	Low	36.6	46.6	68.7	70.9	105.9	122.3	114.8	132.2	123.9	
OpenGL and OpenCL											
FurMark		70	189	172	455	461	307	309	748	502	
LuxMark		353	134	580	177	303	1136	1024	364	1026	

## WP adoption to increase












As Microsoft eases the restrictions around the implementation of WP OS, more manufacturers to start producing <http://dgit.in/MoreWPPhone>



## Firefox's \$25 smartphone

A host of manufacturers have released early models featuring Firefox OS, the cheapest targeting the \$25 market <http://dgit.in/USD25SmartPhone>

GPU Test

	ZOTAC	ASUS	Galaxy	XFX	XFX	ASUS	ASUS	Sapphire	MSI	ASUS	PowerColor
	GTX 750 Ti	GTX 650 Ti DC2T	GTX 660	R7850	R9 270	GTX 650	R9 270X DC2T	R9 270	R9 270X Hawk	GTX 660 DC2T	R9 270X
											
	11,990	12,000	12,850	13,810	14,760	15,250	16,500	16,500	16,800	17,000	17,000
	66	60	69	67	74	52	78	74	79	71	78
	83	75	81	74	75	51	71	68	71	63	69
	60	60	60	60	60	60	82	60	90	71	68
	2+3	3	Lifetime	Lifetime	Lifetime	3	3	3	3	3	3
	GM107	GK106	GK106	Pitcairn	Pitcairn	GK107	Pitcairn	Pitcairn	Pitcairn	GK106	Pitcairn
	1046	1033	980	860	925	1072	1120	945	1150	1072	1100
	1350	1350	1502	1200	1400	1250	1400	1400	1400	1527	1425
	640	768	960	1028	1280	384	1280	1280	1280	960	1280
	40	64	80	64	80	32	80	80	80	80	80
	16	14	24	32	32	16	32	32	32	24	32
	2048	1024	2048	2048	2048	2048	2048	2048	2048	2048	2048
	N/2xY/Y N/Y/N	Y/2xY/Y N/N/N	Y/Y/Y N/N/N	N/2xY/Y 2xY/N/N	N/2xY/Y N/Y/N	Y/Y/Y N/N/N	N/Yx2/Y N/Y/N	N/2xY/Y N/Y/N	N/2xY/N Y/N/Y	N/2xY/Y N/Y/N	N/2xY/Y N/Y/N
	6PIN	6PIN	6PIN	6PIN + 6PIN	6PIN	-	6PIN + 6PIN	6PIN	6PIN + 6PIN	6PIN	6PIN + 6PIN
	3957	3274	4588	4215	5063	2105	5666	5162	5874	4893	5710
	4129	3424	4822	4469	5388	2152	6111	5506	6346	5175	6152
	14050	14045	14092	14001	14009	14108	13972	13990	13961	14073	13992
	32	33	37	35	35	38	36	35	27	36	31
	60	50	67	64	68	64	62	58	58	63	66
	48.59	39.36	57.15	42.03	50.67	26.85	77.26	51.64	87.7	60.14	56.36
	82.94	73.71	103.32	87.45	104.83	46.95	119.93	107.59	122.54	110.42	119.89
	107.42	91.11	130.26	110.01	130.7	59.46	147.66	134.08	150.67	138.72	147.84
	29.3	26.1	36.8	29.8	38	15.4	42.8	38.4	54	40.1	42.8
	99.9	89.2	119.7	91.5	112.5	54.5	125.4	115	128	131.6	126.1
	148.7	123.6	163.1	130.2	161.2	73.6	180.1	161.7	181.7	178.7	181.7
	15.3	10.8	18.8	18	21.8	9.1	22.8	22	23.8	19.2	23.8
	45.5	36.8	60.3	66.2	78.1	29.1	83.5	79	84.5	62.8	84.9
	77.7	60.7	92.2	98.5	99	42.3	96.3	99.7	101	91.9	100.5
	21.9	19.8	29.4	27.5	32.9	10.6	38.2	34.4	39	31.9	38.2
	121.3	105.5	147	142.7	163.8	70	174.4	166.7	170.5	144.2	175
	124	108.1	150.3	146	167.9	71.4	179.6	168.3	181.9	147.3	180.5
	502	454	775	422	500	456	514	503	516	792	522
	1024	315	437	1144	1454	179	1627	1476	1680	459	1652



## RIFTCONers Unite!

The first convention around Oculus Rift to be held soon in the United States  
<http://dgit.in/RIFTCON>



## Skype+Whatsapp+...

Fuze app aims towards bringing Skype, Whatsapp, Flipboard, gaming and much more  
<http://dgit.in/FuzeApp>

## ABOVE ₹20,000

Brand		Sapphire	Galaxy	ASUS	ZOTAC	ZOTAC	MSI	XFX	MSI
Model		R9 270X	GTX 760	GTX 760 DC20C	GTX 760	GTX 760 AMP!	N760 TF 4GD5/OC	R9 280X	N770 TF 2GD5/OC
									
Price (in Rupees)		18,500	18,570	20,000	20,300	21,900	23,500	24,000	24,500
Performance		77	76	76	75	77	77	90	87
Value for money		63	62	90	87	83	77	89	83
Build quality		64	60	60	60	64	82	78	78
Warranty		3	Lifetime	3	2+3	2+3	3	Lifetime	3
Features									
Chipset		Pitcairn	GK104	GK104	GK104	GK104	GK104	Tahiti	GK104
Core Clock (MHz)		1020	980	1006	993	1111	1020	1000	1085
Memory Clock (MHz)		1450	1502	1502	1502	1552	1502	1500	1753
Stream processors/ Shaders		1280	1152	1152	1152	1152	1152	2048	1536
Texture Units		80	96	96	96	96	96	128	128
ROPs		32	32	32	32	32	32	32	32
Memory (MB)		2048	2048	2048	2048	2048	4096	3072	2048
Ports - VGA/DVI/HDMI Mini-HDMI/DP/Mini-DP		N/2xY/Y N/Y/N	N/2xY/Y N/Y/N	N/2xY/Y N/Y/N	N/2xY/Y N/Y/N	N/2xY/Y N/Y/N	N/2xY/Y N/Y/N	N/2xY/Y N/N/2xY	N/2xY/Y N/Y/N
External Power		6PIN + 6PIN	6PIN + 6PIN	8PIN	6PIN + 6PIN	6PIN + 6PIN	8PIN + 8PIN	8PIN+ 6PIN	8PIN + 8PIN
Synthetic									
3D Mark									
Fire Strike	Score	5574	5641	5672	5464	5817	5766	7231	7196
	Graphics	5995	5955	6051	5785	6199	6141	7844	7868
	Physics	14047	14051	14056	14040	14080	14088	14034	14049
Physical									
Temperature	Idle	32	36	38	33	38	36	39	34
	Load	60	82	68	74	81	60	59	83
Games (FPS)									
Bioshock Infinite	Ultra	54.98	70	87.5	79.7	90.1	71.84	74.09	110.14
	Medium	116.57	124.21	128.51	125.15	130.42	129.97	150.13	160.61
	Low	143.9	154.8	157.79	151.36	161.13	161.03	181.74	197.14
Tomb Raider	Ultra	41.7	45.3	46.1	44.2	47.8	46.8	55.9	61.1
	Medium	122.5	147.3	153.2	124.2	155	155.3	164.8	199.1
	Low	175.1	201.4	209.9	282.4	213.6	206.5	233.7	271.4
Hitman Absolution	Ultra	23.1	23.3	22.6	21.3	23.7	23.6	31.4	27.8
	Medium	82.4	74.4	73.5	72.8	75.8	74.1	96.3	85.7
	Low	100.8	99.9	95.5	96.3	96.9	100.8	99.2	95
Sleeping Dogs	Ultra	37.2	36.2	37.6	35.8	38.1	38	51	49.4
	Medium	171.7	167.5	153.4	153.1	156.7	170.3	181.1	162.8
	Low	177.7	169.8	158.3	158.1	157.9	167.4	191.4	165.7
OpenGL and OpenCL									
FurMark		508	931	932	931	965	917	746	1054
LuxMark		1612	545	537	523	556	541	2354	705

## Halo 5 in 2014

The next installment in the Halo series has been rumoured to have a 2015 launch date  
<http://dgit.in/Halo2014>



## Harvard dogecoin mining

The Harvard Odyssey supercomputer was found to be secretly mining Dogecoin  
<http://dgit.in/HarwardDoge>

**GPU Test**

## HOW WE TESTED

These cards were tested to rate them on three primary categories. The first is pure performance under which current AAA titles with high graphical requirements are run multiple times by varying the configuration to judge how the card performs as graphical load varies. A score of 30 FPS is the bare minimum average for an average gaming experience while the fabled 60 FPS gets more attention from gamers. Apart from games, the cards were also run through some synthetic benchmarks which are mentioned below. The rig on which these cards were tested was comprised of the following hardware:

Processor: Intel Core i7 4960X

Motherboard: ASRock X79 Extreme 9

RAM: 2x ADATA AX3U2133XW4 G10-2X (4x 4GB @ 2133MHz)

Boot drive: Seagate 600 240GB SSD

Cooler: Stock Intel liquid cooling solution

SMPS: CoolerMaster Silent Pro M850

Monitor: BenQ GW2450

### Performance benchmarks

#### 3DMark

Being an all round benchmarking software and due to the fact that it's considered as a standard by many organisations, the new 3DMark suite was used for the synthetic test. The Fire Strike test was used to judge each card's performance while also to validate the scores against users who've used a similar configuration.

#### FurMark

This is an OpenGL based benchmark that is capable of running a burn test on the GPU which is where we get our load temperatures from. Also the score obtained is considered towards the that card's performance parameter.

#### LuxMark

LuxMark is an OpenCL benchmark and helps judge a card's parallel processing capabilities. It basically uses the GPU to render a 3-dimensional scenario for about 120 seconds. This score is also added onto the performance parameter.

#### Bioshock Infinite

One of the highly talked AAA title released last year, Bioshock Infinite is moderately taxing on the graphics card. So it gives a decent FPS across all segments and especially helps discern performance difference in the lower segments.

#### Tomb Raider

Another AAA title, Tomb Raider features is much more taxing on graphics cards compared to Bioshock Infinite and is used to discern performance differences in the middle segment.

#### Sleeping Dogs

It has been quite a while since this game has been launched but it still manages to be more resource heavy than the previous two gaming benchmarks and has a mixture of day and night scenarios.

#### Hitman Absolution

This is the last game benchmark that we run and is so power hungry that even the flagship cards of the current series can't manage to get a decent FPS. The score mostly lies in the early to mid 20's while exceptionally powerful cards can push it past 30.

#### Build Quality

Each card is examined closely to check which materials are used in the construction of the body and shroud. Cooling technology which includes the type of heatsink and the materials used in the construction are also considered. Cards having a heatsink over the VRM and having extra reinforcement with as less dangling components are given a higher score. Extra features like dual bios, v-check points, better fans etc., are also considered towards build quality. The temperature at load is used to judge the cooling technology.

#### Value for money

The total performance score generated by a particular card is divided by the cost of the card to deduce the performance/rupee factor. Often this leads to the most cheapest card in the lot being picked as the card that offers the most value for your money. However, this parameter also helps decide between close competitions as cards with the same GPU often end up being very close in terms of performance. This is where the VFM comes into the picture and decides the winner.

all you want is something to enable your monitor, the second segment helps with gaming at full HD using a decent configuration. The last segment is for people who consider gaming a

priority. With these cards you are guaranteed to not need any upgrades for about two years if you prefer to game at 1080p using maximum configuration without bottlenecks.

## Performance

Given the fact that most of our benchmarks are more suited towards mid-range and high end cards the low end cards would obviously struggle; with

single digit scores being the norm. However, breaking down the test into three segments provided a fair ground for all cards since they were then compared with similar performing SKUs.

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### 3D Wax printing

3D printing hardware can now start using wax to create models, the first prototype has been successful <http://dgit.in/3DWaxPrint>



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You can now block people from accessing your profile or communicating with you <http://dgit.in/LinkedInBlock>



GALAXY GTX 660 GC 2GB

When we look at the NVIDIA cards we noticed that there is a huge disparity in pricing in the current generation. The GTX 750 Ti comes in at ₹11,990 and the very next card which happens to be the GTX 760 starts at ₹18,570. So there is a 6.5K difference between these two cards which is filled with previous generation units. AMD also has a similar pricing pattern between the R9 270X and the R9 280X with a similarly vast 6K gap in pricing.

This is a common tactic which allows manufacturers to slowly transition out from

only SKU. The retail GTX 660 which you can buy has a different configuration than the OEM SKU and performs much lower which makes it a no brainer decision to go with the GTX 760. With AMD, you face a similar situation since the R9 270X and the HD 7870 are equally priced. Therefore, going in for the improved R9 270X in this case is an easy decision to make.

### Build quality

We saw some decently built cards this year and that too in the mid-range segment. ASUS

well and fine but when you start charging a price premium for doing nothing then things stop making any sense and . Moreover, reference designs from both AMD and NVIDIA aren't capable of keeping low temperatures without ramping up the noise level. The cooler designs are barely sufficient since the load temperatures often frolick around the lower 80s in the reference de-

this time, after all it is based on the Tahiti chip and that too a fully enabled one. Other than minor modifications it is essentially a Radeon HD 7970 which was the flagship card in the last test. So when the flagship gets a price cut and drops down into the upper mid-range segment it's pretty much given that it is going to win hands down. The ZOTAC 770 AMP! Edition came real close and the ASUS



MSI N770 TwinFrozeR

sign ,thus, keeping the fans at a perpetual high RPM state.

A rather irritating aspect that we noticed in plenty of cards this year was the placement and orientation of the power connectors. The release tabs were pointing inwards which made them difficult to unhook. It's taken for granted that cards once installed are unlikely to be removed regularly but it's still irksome to handle when using SLI.

R9 280X even topped the performance of this card but couldn't make it to the podium because of a higher price which exceeded the parameters set for this comparison test.

As for second place, the MSI N770 Twin FrozeR came really close to winning first place but unfortunately it didn't score well in the OpenGL test which gave the AMD card a significant lead. Had this been a purely gaming focused bench-



ZOTAC GTX 760 AMP! Edition

a generation, however, this gap also counts for the sweet spot that most gamers go for. The performance between the OEM GTX 660 and the retail GTX 760 is moderate but the price difference doesn't scale proportionally in India. The OEM GTX 660 and the retail GTX 760 are based off the same Kepler chip but you can't get the fully enabled GTX 660 for sale since that is an OEM

has maintained a good standard of having a better coolers on almost all cards. The direct CU coolers seem to be doing their job quite well and the overall choice of materials on the card makes them sturdy yet moderately heavy. MSI is another brand which seems to be paying extra attention to their card. Most manufacturers don't bother fiddling with the reference design and that's



XFX R9 280X



### Winners Best Performer

It wasn't a surprise that the XFX R9 280X takes the crown

mark the MSI card would have actually won hands down. The two cards are well built but the MSI card ran at hotter tempera-

## Commercial space race

Another firm has set its sights on the lucrative commercial space segment. Craft to be called Spacebus <http://dgit.in/Spacebus>



## Mind controlled music player

Researchers have demonstrated a technology that allows controlling a music player using your mind <http://dgit.in/MindPlayer>

**GPU Test**

tures in our tests which is actually quite surprising given that AMD cards are generally way hotter than NVIDIA cards.

The third best performing card is also from MSI, the R9 270X Hawk makes for a rather well built card and scores the highest as far as build quality is concerned.

The XFX R9 280X sports a fairly decent build with two 80 mm fans and they run quite hot when idle but load temperatures didn't cross 60



XFX R7 240

degrees celsius which makes it a cool AMD card but it is a little on the noisy side with a constant whine even under idle load conditions. The Best Performer Award only goes to one card in the entire test and the XFX R9 280X rightly deserves the same.

### Value For Money

Given the vast number of cards that came in for the comparison

and the fact that the performance spectrum of the cards turned out to be quite wide, it was imperative that the cards be broken down into categories based on price and then each

category be analysed to decide a VFM card in that category. With this in mind we broke down the entire comparison into three segments. The first was for cards below ₹10,000. The second category was for cards between ₹10,000 to ₹20,000 and the final category was for all cards above ₹20,000 till ₹25,000 which was the ceiling for the comparison test as well. Here are the winners:

### Below ₹10,000

The card that won the Value For Money award in this segment happens to be the XFX R7 240 priced at ₹4,950. Generally, cards that sit at the bottom of the list tend to be really low powered and have no active cooling at all. This card wasn't that different given that it was powered by the PCIe port but has a 50mm fan to cool the GPU which barely managed to hit 58 degrees. Forget about playing AAA titles altogether if you are going in for this card as even on low configuration this card couldn't get past 30 in all but two benchmarks. But a card like this could mean

the difference between a silly number cruncher and a decent computer. Also it's a low profile card which makes it suitable for small form factor machines. Casual games, however, should run pretty well and even browser based games should run well since they now make use of GPU acceleration.

### Between ₹10,000 to ₹20,000

Yet again XFX manages to bag another award in the VFM category and this time it's the XFX R7 260X. It comes at a price barely ahead of the lower price bracket. Priced at ₹10,675 this rebadged HD



XFX R7 260X

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**Elite: Dangerous reviewed**

Read the review of Elite: Dangerous – the new space simulator on the block  
<http://dgit.in/eldang>

7790 isn't that ahead of the R7 240. In fact, the performance isn't suited for the high end configuration at all but when you do dial the settings down to medium then all new AAA titles become playable. There will definitely be instances of stuttering when experiencing any scenario with too many moving elements but overall this card should be more than enough for HTPCs and folks wanting to spend some money and get gaming at a moderate configuration.

The holy grail of FPS count (which is 60 FPS in case you were wondering) will be difficult to achieve but for roughly a year down the line you shouldn't face any major issues. The card shares a similar build quality as the previous XFX card that we looked at. This one does require a 6 pin PCIE power supply. However, you might want to check out the Editor's pick if your budget falls in this segment.

**Above ₹20,000**

No, no it isn't XFX this time but ASUS that gets the VFM award in the top-most segment. Also, it's an NVIDIA card this time. ASUS' GTX 760 DC2OC is an overclocked version of the GTX 760 which performs better than some of its slightly expensive counterparts. But the pattern (if you'd have

noticed) is still prevalent where the cheapest card in a segment wins. Performance wise the card is quite good and scores above 30 FPS in most gaming benchmarks except Hitman Absolution. Now that's a game benchmark which manages to bring even the flagship cards to their knees so we wouldn't worry about that. As with any NVIDIA card, even this one has a lacklustre performance in OpenCL benchmarks. So folks interested in harnessing the parallel performance abilities of a GPU might keep away from it, however, NVIDIA cards excel at games compared to the AMD counterparts.

ASUS cards are quite durable and this card has the DC2 cooler with plenty of heat-pipes in direct contact with



MSI R9 270X Hawk

the die. This card isn't bad at all since it offers good performance and is one of the more durable cards we've seen. The new cards feature Cooltech fans which are quite efficient at generating static pressure.

segment of the comparison test this particular card scores the highest when it comes to the average score regarding all three major parameters. With a performance score of 79, it is the best performing card in the middle segment with the ASUS R9 270X lagging behind by just one point. This makes the VFM scores for both cards ridiculously similar but the aspect that tilted the scales in favour of the MSI card was that it has a better build quality than the ASUS card. And this includes the cooler which managed to keep the card at a lower temperature at both load and idle conditions.

**Editor's pick**

For this year's Editor's pick we've decided to go ahead with the MSI R9 207X. There are numerous reasons behind

This doesn't mean that the ASUS card doesn't have a great build quality, it's just that MSI went a little overboard with this one while only charging



Powercolor R9 270X PCS+

a lower price premium when compared to the ASUS card. They both have a three year warranty and the packaging is quite good with foam cushions that offer a snug fit. Finally, the MSI R9 270X Hawk has a dual bios feature, v-check points and is clocked 30 MHz higher than the ASUS card.

Two cards worthy of mention this year are the NVIDIA GTX 750 Ti and a ZOTAC GTX 750 Ti OC. The maxwell based cards are the first under the new architecture and the NVIDIA reference card doesn't even require external power. While the ZOTAC card performs ever so slightly better than the reference card it unfortunately, requires a 6 pin power supply. This narrows down the usage scenarios by a little amount.

Now that you've read about the winners, we'd like to hear your opinions regarding the same. Do write in to us and don't forget to catch the individual reviews of all these cards online on our website.

*Note: The prices mentioned in this test are excluding sales and other applicable regional taxes. Also, lifetime warranty is decided by the distributors and varies from country to country.* **d**



ASUS GTX 760 DC2OC



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<http://digit.in/1kOjLXn>

# Get Smart on a budget

20 budget smartphones, 12 brands.  
Which one will be your next purchase? We help you decide





## Android's critical vulnerability

If you're using any Android 4.2 device, or one that sports an even older version of the OS, you're vulnerable. Please read: <http://dgit.in/1f1bqHq>

## DIGISOL's i-Trail Real-time GPS Tracker

The i-Trail GPS Vehicle Tracker helps in tracking one's personal vehicle in real time over an online portal with real time map location. It supports apps as well.

Kunal Khullar

[kunal.khullar@thinkdigit.com](mailto:kunal.khullar@thinkdigit.com)

A smartphone has become a necessity for the common man as it not only is a source of entertainment, but has also evolved into the device that allows you to have an identity in this world. Today the smartphone is a mean machine that can play and record HD videos, find places in a matter of seconds, play 3D games with details that were only seen on gaming consoles, connect you to your social network websites and much more.

With that said, we come down the budget category of smartphones. In the past, getting a worthy smartphone meant shelling out a month's worth of earnings but those days are gone. The budget category has evolved to the point that one can now easily get their hands on a quad-core processor powered smartphone and a crisp looking display without having to sell off a kidney.

Indian and international device makers have flooded the market with a number of devices and this leaves the consumer in a bit of a tiff. So to make things a bit easier for you, the consumer, we have carried out an extensive comparison test of some of the best smartphones available under the ₹20,000 price tag.

### The Platforms

Android dominates the budget category of smartphones today since a vast number of mobile phone manufacturers have adopted it. Most of the smartphones that we have picked run on Android 4.2 Jelly Bean. Although Google has already launched 4.4.2 KitKat

a number of manufacturers are still working on the update and except for the Moto G, there isn't any budget smartphone in the market running on the latest update. However, we do expect some smartphones in the near future with the new update as Google has confirmed that KitKat will be supported on devices running as low as 512MB RAM.

Microsoft's Windows Phone is growing well, but with the major chunk only going to Nokia smartphones, the number of consumers for Windows Phone are few when compared to Android. The only good thing about the platform is that devices running on WP are not restricted to the high end category. The latest Windows Phone Black update has already arrived on all of the Nokia Lumia devices which again, is a plus point for the platform. The bad news for Windows Phone is that other than Nokia, there isn't any other manufacturer which has shown keen interest in the platform. News has it that Microsoft is trying to

push Samsung, Sony and ZTE to launch a couple of devices every year but whether that can change the numbers for Windows Phone remains to be seen.

BlackBerry is still fighting hard in the market to gain a position; however with the lack of consumers and devices, the new BB OS 10 has failed quite miserably. There are only four devices running on the BB OS 10 platform (Z10, Z30, Q10, Q5), and only the Q5 falls under the category of affordable smartphones. The latest BB OS 10.2.1 update is already out, which now let's you install Android apps by side-loading the installation file on to the device. While this feature sounds exciting, BlackBerry might very well have dug a grave for their BlackBerry World app store.

### Under ₹15,000

Perhaps the most crucial segment is under ₹15,000 as a lot of consumers today buy their first smartphone from this section. While one cannot expect really high performance, there are some nice options to consider with exceptionally good hardware. So much so, manufacturers are now offering quad-core processor powered and full HD display equipped smartphones. And it doesn't end there; manufacturers have also upped their game in terms of design and build quality.

So without further ado, let us introduce you to the contenders for the category of smartphones under ₹15,000. For our shootout we have included a good number of phones from a vast assortment of brands, these include the Karbonn Titanium S5 Plus, Motorola's vastly popular Moto G, Xolo Q1000S, Xolo Play, Micromax Canvas Doodle 2, Lenovo S920, iBerry Auxus



Nokia Lumia 720

Nuclea N1, Nokia Lumia 525 and the Nokia Lumia 625.

### Design

Available for about ₹10,000, the Titanium S5 Plus from Karbonn is the most affordable handset in the category and it offers a bright 5-inch display with a glossy plastic body. Karbonn has splashed on some chrome to give it a nice feel and the overall finish of the smartphone is actually quite good. Apart from the volume and power/lock keys there are no physical buttons on the smartphone. There is a front and rear camera on the smartphone along with an LED flash.

Motorola has made a comeback in India with the Moto G and has created quite a buzz with units being sold out the same day of the official launch. But does the Moto G offer a sturdy build quality? Well for starters it does sport a crisp 4.5-inch 720p display and nice curvy back that fits well in the hand. The Moto G did feel slightly heavy when compared to other phones, but the overall finish is upright. There are no capacitive buttons so the standard Android navigation



XOLO Q1000S



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## Putting the Wammy on

Wicked Leak to launch Wammy Ethos Tab 3 Quadcore tablet with a 7-inch IPS Display, 1.2 Ghz Processor and 5MP Camera



## ZyXEL FMT3251

ZyXEL Communications plan to showcase the FMT3251 – a brand new UMTS small cell CPE with Wi-Fi at the MWC 2014

**Smartphones under ₹20,000**



Lenovo S920

keys are on the screen itself. The back panel is removable, however, you cannot remove the battery. Also, you have the option of choosing from various back-panels and flip-cases.

The only smartphone in the category with a full metal body is the Xolo Q100S. It has a nice and slim metal uni-body design that gives the smartphone a premium look. Another highlight here is the 5-inch 720p display which doesn't look shabby at all. It has the standard three capacitive buttons below the display along with physical keys for the volume and lock/power controls.

The Xolo Play is another great offering by the manu-

## HOW WE TESTED

A large number of device manufacturers, both international and Indian, are spilling out a variety of smartphones in the Indian market today. Apart from the huge plethora of Android devices, there are some Windows Phone smartphones to choose from as well.

So we picked up some of the best budget smartphones under Rs. 20,000 and as soon as they arrived, we divided them in two sections of Rs.10,000 to Rs.15,000 and Rs.15,000 to Rs.20,000 price segments. We had a total of

fifteen Android smartphones, three Windows Phones and one BlackBerry smartphone for the shootout and we placed them according to the most affordable to the most expensive available in the market. All of the smartphones were then updated, including apps as well as firmware, so that the best and optimum performance could be squeezed out.

The focus of this smartphone shootout was on design, build quality, features and performance. We carried out some benchmark tests on all of the smartphones to

determine the hardware performance. These tests help us find the best smartphone in terms of raw hardware performance. We also carried out some multimedia tests which included playing music on the standard MP3 player, run HD videos, browsing the internet, a bit of gaming, some call tests and carried out our standard battery test.

Scoring of all the smartphones was done in three sections which were performance, specifications and design. We summed up the scores of each smartphone to pick out the winners.



Micromax Canvas Turbo 1

facturer. It sports a 4.7-inch 720p display along with a good looking design that has metallic accents along the rim. The back of the smartphone is made out of soft plastic which has a rubberized matte finish adding a nice grip to the handset. Rest of the features are standard with capacitive Android navigation keys under the display, front and rear cameras, and hardware keys for volume and power/lock control.

The biggest smartphone of the lot is the Micromax Canvas Doodle 2 boasting a large 5.7-inch display. It is definitely a



Nokia Lumia 525

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HTC Desire 500 Dual SIM

smartphone to use with both hands and it comes with a useful capacitive stylus to scribble notes or as the name suggests, doodle. We weren't disappointed with the build quality as it felt pretty sturdy, however, it was the heaviest of the lot in terms of weight.

Nokia is known for its great build quality and it is quite evident from the Lumia 525. The Windows Phone running smartphone has a very clean and simple look which is a signature Windows Phone look and it comes in a bunch of nice glossy colour options. For a smartphone at this budget, Nokia has done very well in the design department, although we wish they had included an LED flash with the camera. Nokia always focuses a lot on the camera thus there is a physical camera shutter button along with volume control and the lock/power key.

The Lumia 625 was once Nokia's biggest smartphone with 4.7-inch display but sadly it has a low resolution of 800x480 pixels. The design of the Lumia 625 is truly admirable

as it has a nice polycarbonate back panel. It has physical keys for volume control, lock/power control and also the camera shutter release. The three navigation keys are capacitive.

**Performance**

Both of the Nokia Lumia smartphones run on Windows Phone 8 and offer exactly the same UI features and apps. The smartphones were perfectly smooth and offered a lag free experience during the test period. We didn't face any issues with any of the apps that we installed and even gaming was pretty smooth. Multimedia playback was a bliss on both of the smartphones as they supported all the standard video and audio formats. Camera performance was pretty standard and the quality of pictures was actually not bad considering both of the smartphones have a 5MP camera module.

The Moto G was the best performer in the category as it beat all the smartphones in the benchmark tests. Everyday performance on the smartphone was pleasing as well; probably



Motorola Moto G



Karbonn Titanium S5 Plus

because it runs on stock Android 4.4.2 so there aren't any custom UI's or layers. Scrolling through the menu and home screens was smooth and multitasking didn't slow down the smartphone at any point of time. The camera on the Moto G has a 5MP sensor which obviously isn't the best in class but works quite well. There isn't a lot of shutter lag and the quality of pictures is very much acceptable. Under good lighting conditions, pictures turned out to be sharp and had decent details. Low light conditions made the pictures lose some details and you could see some amount of grain.

The Xolo Q1000S is a good performer when it comes to the hardware it is running on. It has a 5-inch display with a 1280x720 pixel resolution giving it 293ppi pixel density. There was no lag at all while navigating the smartphone or using it for multitasking. When it came to testing video files, we found that AVI and MP4 files ran smooth. The rear camera of the Xolo Q1000S has a 13MP module although the performance was just acceptable.

The iBerry Auxus Nuclea N1 runs on stock Android 4.2.1 out of the box with hardly any changes to the UI. The overall performance of the device seems good and we didn't notice a lot of lags or glitches while scrolling through the UI or when switching between apps. The Mediatek processor proves to be very good, although power hungry games like Real Racer 3 weren't as smooth as you would expect from a quad-core processor running device. Also on a number of occasions the 3D Mark benchmark app crashed and we couldn't get proper results. We weren't impressed with the camera as it provided average pictures which lacked a bit of punch on the colours and contrast.

The Karbonn Titanium S5 Plus runs on Android 4.2.2 Jelly Bean with a custom layer on top which includes options for customizing the UI via themes, wallpapers, fonts and more. The handset handles the



Lava Iris Pro 30

शैल

Shail Group of Institutions



# TECHNO HOLI

## 2014

### 6<sup>th</sup> & 7<sup>th</sup> March



*Engineering a World of Change*

**6<sup>th</sup> March 2014- Theme: MAD DAY**

- CAD
- Blind Remote Race
- Electronic Mania
- Robo Race/ Line
- Treasure Hunt
- Open Stage Fun
- Roadies
- Quiz Competition
- Mobile Texting
- Workshop by Google Group on Android Gaming
- 7 a Side Football
- Technical T-Shirt Painting

**7<sup>th</sup> March 2014**

- Car Driving
- Gully Cricket
- SWAROOP
- Science Exhibition
- LAN Gaming
- Workshop by Microsoft
- Video & Photography
- Basketball
- Battle of Band & Singing
- Robo War/Line Follower
- Collage Making
- Play Back Mobile App
- Best Technology out of Waste

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## PayPal poet for hire

In a run up to Valentine's day, PayPal had a service that let you order a custom-written poem for your significant other.



## Can cans save Sony?

Would a series of great headphones help save Sony amid mounting financial woes <http://dgit.in/sonyphns>

## UNDER RS. 15,000

Brand	Nokia	Karbons	Motorola	Xolo	Xolo	Lava	Micromax	
								
<b>Model</b>	Lumia 525	Titanium S5 Plus	Moto G	Q1000S	Play	Iris Pro 30	Canvas Doodle 2	
<b>Price (₹)</b>	10,249	10,250	13,999 (16GB)	14,320	14,320	14,500	14,500	
<b>Features (of 35)</b>	15.4	22.4	21.7	22.75	22.05	24.85	23.8	
<b>Performance (of 45)</b>	28.33	28.88	34.13	29.55	28.66	26.18	26.55	
<b>Build and Design (of 20)</b>	15.35	13.42	15.35	14.58	13.68	14.06	13.55	
<b>Overall (of 100)</b>	59.08	64.7	71.18	66.88	64.39	65.09	63.9	
<b>Rear camera</b>	5MP	8MP	5MP	13MP	8MP	8MP	12MP	
<b>Front camera</b>	NA	VGA	1.3MP	5MP	2MP	3MP	5MP	
<b>Built-in Flash</b>	N	Y	Y	Y	Y	Y	Y	
<b>CPU speed</b>	1GHz	1.2GHz	1.2GHz	1.5GHz	1.5GHz	1.2GHz	1.2GHz	
<b>CPU cores</b>	2	4	4	4	4	4	4	
<b>OS</b>	Windows Phone 8	Android 4.2.2	Android 4.4.2	Android 4.2	Android 4.1	Android 4.2.1	Android 4.2.1	
<b>Expansion slot</b>	Y	Y	N	N	Y	Y	N	
<b>RAM</b>	1GB	1GB	1GB	1GB	1GB	1GB	1GB	
<b>Display</b>	4 inch	5 inch	4.5 inch	5 inch	4.7 inch	4.7 inch	5.7 inch	
<b>Display resolution</b>	800x480 px	800x480 px	1280x720 px	1280x720 px	1280x720 px	1280x720 px	1280x720 px	
<b>Display PPI</b>	233	220	326	294	312	312	258	
<b>Battery capacity</b>	1430mAh	1800mAh	2070mAh	2500mAh	2000mAh	2000mAh	2600mAh	
<b>Weight</b>	124gms	104.5gms	143gms	158gms	167gms	114gms	220gms	
<b>Dual-SIM</b>	N	Y	Y	N	N	Y	Y	
<b>FM Radio</b>	Y	Y	Y	Y	N	Y	Y	
<b>Built-in Storage</b>	8GB	4GB	8/16GB	16GB	4GB	4GB	16GB	
<b>USB OTG</b>	N	N	Y (USB Host only)	N	N	N	N	
<b>NFC</b>	N	N	N	N	N	N	N	
<b>Battery % after 1 hour of HD video playback</b>	80	78	82	80	85	83	86	
<b>Benchmarking</b>								
<b>Antutu</b>	7523	16888	16556	16541	14664	13562	13709	
<b>Quadrant</b>	NA	5866	8540	4881	4124	4039	4039	
<b>Smartbench 2012</b>	NA	4262	4887	4370	4623	3744	3795	
<b>3dMark</b>	NA	2985	5679	3756	3613	3183	3159	
<b>Sun Spider (Lower is better)</b>	1594ms	1291ms	1420ms	1195ms	1298ms	1467ms	1473ms	
<b>Cam Speed</b>	452	NA	NA	NA	NA	NA	NA	

OS pretty well and we saw a few glitches here and there but the overall performance was quite good. Multitasking didn't show any issues as we were able to run about 8-10 apps at the same time without any crashes.

The Xolo Play is the only smartphone in the category that runs on an Nvidia Tegra 3 processor clocking at 1.5GHz with

four cores. The interface on the smartphone is really smooth and so is the touchscreen. Navigating apps, playing games, browsing the Internet, the interaction with interface on the display was great. Thankfully it has 4.7 inch display which didn't exactly feel too big to use with one hand. Gaming on the smartphone was truly

a pleasure as all the high end games like Asphalt 8, FIFA 14 and Dead Trigger 2 ran smooth as butter.

## Winner

We have awarded the Best Performer and Editor's choice to the Motorola Moto G simply because of its healthy spec sheet and unmatched performance.

The Karbons Titanium S5 Plus gets the Best Buy award as it offers an overall nice feature set at a very low cost.

## Under ₹20,000

This is primarily, what we like to call it as, the bridge category as it connects the high end to the low end segment of smartphones. People who buy smart-







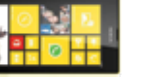

## Eve Online touches reality

Its developer CCP Games aims to build a massive monument in Iceland to pay tribute to every single player of the MMOG

## Geeky parenting gadgets

BleepBleeps a project on KickStarter aims to guide parents through the different stages of parenting, using gizmos that connect to your smartphone.

**Smartphones under ₹20,000**

UNDER ₹20,000							
Lenovo	iBerry	Nokia	Karbons	Micromax	Lenovo	Nokia	HTC
							
S920	Auxus Nuclea N1	Lumia 625	Titanium X	Canvas Turbo	P780	Lumia 720	Desire 501 Dual SIM
14,999	14,999	15,000	15,500	16,000	16,999	17,000	17,500
24.15	29.4	16.8	30.8	27.65	23.1	17.5	22.4
26.62	29.52	32.28	29.48	28.18	27.32	29.37	19.83
13.81	13.42	16.13	13.21	13.7	14.67	15.64	14.18
64.57	72.34	65.21	73.49	69.53	65.09	62.51	56.41
8MP	13MP	5MP	13MP	13MP	8MP	6.1MP	8MP
2MP	8MP	VGA	5MP	5MP	VGA	1.3MP	2.1MP
Y	Y	Y	Y	Y	Y	Y	Y
1.2GHz	1.5GHz	1.2GHz	1.5GHz	1.5GHz	1.2GHz	1GHz	1.2GHz
4	4	2	4	4	4	2	2
Android 4.2	Android 4.2	Windows Phone 8	Android 4.2.2	Android 4.2.1	Android 4.2	Windows Phone 8	Android 4.1
Y	Y	Y	Y	N	Y	Y	Y
1GB	1GB	512MB	1GB	2GB	1GB	512MB	1GB
5.3 inch	5 inch	4.7 inch	5 inch	5 inch	5 inch	4.3 inch	4.3 inch
1280x720 px	1920x1080 px	800x480 px	1920x1080 px	1920x1080 px	1280x720 px	800x480 px	800x480 px
277	440	199	441	441	294	217	217
2250mAh	2800mAh	2000mAh	2300mAh	2000mAh	4000mAh	2000mAh	2100mAh
159gms	121gms	159gms	143gms	137gms	176gms	128gms	130gms
Y	Y	N	Y	Y	Y	N	Y
Y	Y	Y	Y	Y	Y	Y	Y
4GB	4GB	8GB	16GB	16GB	4GB	8GB	8GB
N	N	N	Y	N	Y	N	N
N	N	N	Y	N	N	Y	Y
85	74	92	85	80	93	90	75
13519	15522	9295	15452	15291	13504	7178	10530
4964	5623	NA	5792	4636	4681	NA	2858
3494	4772	NA	4458	4356	3508	NA	2505
3188	3800	NA	3143	3170	3131	NA	1794
1450ms	1158ms	1175ms	1182ms	1191ms	1349ms	1438ms	2046ms
NA	NA	425	NA	NA	NA	429	NA

phones in this range are have to compromised on some of the features which they could have had if they were to invest in a high end device. Again we have a number of Android devices along with one Windows Phone and finally a BlackBerry device has been thrown in the mix.

The smartphones that we choose for this category include

the Karbons Titanium X, Micromax Canvas Turbo, Lenovo P780, HTC Desire 501 Dual SIM, Intex Aqua i7, HTC Desire 500 Dual SIM, Xolo Q3000, Gionee Elife E6, Nokia Lumia 720 and the BlackBerry Q5.

### Design

The Titanium X by Karbons comes with a nice uni-body

design with a curved back which provides a nice grip. The display is 5-inch touchscreen offering a full HD (1920x1080) resolution and it is slightly raised up from the rest of the body. The smartphone is mostly plastic with chromed up power/lock key and volume control keys. It is the most affordable smartphone in this category,

and quite frankly it doesn't look bad at all.

The Lenovo P780 comes in with very chunky design as it has a huge and bulky 4000mAh battery. Other than that it has a mix of metal, chrome and plastic in the body and apart from the weight, the smartphone gives off an impression of a premium



## Smartphones under ₹20,000








## 3D printer plays air hockey

AHRobot is an air hockey robot player built using standard RepRap 3D printer parts, and as it turns out the thingamajig is pretty darn good

## Sony's TV troubles

There is speculation that Sony's TV business could soon get canned. There are rumours of internal troubles

UNDER ₹20,000					
Brand	← Intex	HTC	Xolo	BlackBerry	Gionee
					
Model	Aqua i7	Desire 500	Q3000	Q5	Elife E6
Price (₹)	18,500	18,900	19,900	19,990	20,000
Features (of 35)	28	22.75	30.1	21.7	26.25
Performance (of 45)	28.62	21.86	30.25	24.24	29.08
Build and Design (of 20)	13.58	14.06	13.21	11.88	14.06
Overall (of 100)	70.2	58.67	73.56	57.82	69.39
Rear camera	13MP	8MP	13MP	5MP	13MP
Front camera	5MP	1.6MP	5MP	2MP	5MP
Built-in Flash	Y	Y	Y	Y	Y
CPU speed	1.5GHz	1.2GHz	1.5GHz	1.2Ghz	1.5GHz
CPU cores	4	4	4	2	4
OS	Android 4.2	Android 4.2	Android 4.2	BB 10 OS	Android 4.2
Expansion slot	N	Y	Y	Y	N
RAM	2GB	1GB	2GB	2GB	2GB
Display	5 inch	4.3 inch	5.7 inch	3.1 inch	5 inch
Display resolution	1920x1080 px	800x480 px	1920x1080 px	720x720 px	1920x1080 px
Display PPI	441	217	386	328	441
Battery capacity	2000mAh	1800mAh	4000mAh	2180mAh	2000mAh
Weight	143gms	123gms	201gms	120gms	128gms
Dual-SIM	Y	Y	Y	N	N
FM Radio	Y	Y	Y	Y	Y
Built-in Storage	32GB	4GB	16GB	8GB	32GB
USB OTG	N	Y	Y	N	N
NFC	N	N	N	N	N
Battery % after 1 hour of HD video playback	75	72	88	86	85
Benchmarking					
Antutu	15453	11613	15485	9000	15551
Quadrant	4742	5141	5718	NA	5718
Smartbench 2012	4544	4506	4486	NA	4271
3dMark	3693	0	3604	NA	3719
Sun Spider (Lower is better)	1198ms	1701ms	1199ms	1698ms	1727ms
Cam Speed	NA	NA	NA	450	NA



XOLO Play

the Canvas Turbo has a very balanced design with a nice set of features.

We were highly impressed with Nokia Lumia 720 in the design department going by the countours, choice of light-weight materials and the brilliant display, Nokia has put in a great deal of effort in designing this smartphone. The back is all polycarbonate and has a matte finish. Apart from the three

smartphone. It comes with a 5 inch 720p display which has great brightness levels. There are the usual three navigation buttons below the display, front and rear cameras, and hardware keys for volume and lock/power controls.

One of the most minimalistic and simple design was seen on the Gionee Elife E6. It comes with a slim uni-body design measuring in at 7.9mm in thickness and is pretty

lightweight. The back of the smartphone has matte finish which makes its less prone to slipping out of your hand. It has the microUSB port at the bottom along with the dual stereo speakers. The left houses the microSIM card slot and the right has the volume control keys. The headphone jack and the power button are on the top. The back has the camera with an LED flash in a rather unusual corner which is slightly an

issue when clicking pictures in landscape mode.

Micromax's flagship smartphone, the Canvas Turbo has a strong and sturdy build and looks quite similar to the Canvas Doodle 2. The smartphone has aluminium built so it is light as well as strong at the same time. It comes with the standard three capacitive buttons below the display. The rear panel is sealed so the battery is not user accessible. Overall



Lenovo P780

## Lord of Ads?

Check out brilliant ad mockups by an advertising student from Berlin who has used popular phrases from LOTR to create eye-catching ads.



## Long lasting pizza

US Military researchers have made a pizza with a shelf life that can last up to 3 years.

**Smartphones under ₹20,000**



XOLO Q3000

capacitive buttons under the display, it has physical keys for volume control, lock/power control and also the camera shutter release.

A worthy mention for their design philosophy in the smartphone world is HTC. The Desire 500 Dual SIM is a great looking smartphone and it has a perfect balance of good looks and design. The smartphone is all plastic, but it doesn't give off a low quality feel. It boasts a 4.3-inch display which is perfect for one handed operation. HTC has only used two capacitive buttons instead of the three

and has hardware keys for the power/lock and volume key which are nicely flattened into the body and doesn't feel as if they're out of place.

### Performance

Almost all of the Android smartphones in the under ₹20,000 category are powered by quad-core processors and run on Android 4.2 Jelly Bean. We didn't face any glitches or bugs in any of the smartphones and performance was exceptionally good. The only physical QWERTY keyboard smartphone that we included



Karbonn Titanium X

was the BlackBerry Q5 running on the latest BB OS 10.2.1 update. And lastly, the Nokia Lumia 720 was the only Windows Phone 8 smartphone in this category.

The Xolo Q3000 is the only phablet in the category and it boasts great performance thanks to its great hardware. The OS is stock Android so user experience was lag free and everyday performance was very sound. Benchmark results of the device were very good although, we weren't entirely impressed with the gaming performance.

Karbonn's Titanium X is a strong contender for this category as it features some great specs along with smooth and fluent performance under its belt. Running on stock Android 4.2.2 the Titanium X didn't show any signs of underperformance and we were quite impressed as it is the most affordable smartphone in its category. High benchmark scores and gaming performance proved that Karbonn has done well this smartphone.

We included the P780 by Lenovo as it has one of the biggest batteries on a smartphone rating at 4000mAh. Other than awesome battery performance the smartphone proved to be quite a decent performer when

it came down to day-to-day performance. Although, we really wish that it had more internal memory since 16GB is pretty much the norm these days.

We already told you about the sexy and lightweight design of the Gionee Elife E6, but honestly we weren't truly excited by the performance. The smartphone does come with a nice set of specifications, but Gionee messed up a bit with its custom UI. The smartphone runs on Android 4.2 but the UI layer on top is a bit too heavy for the smartphone to handle. On some occasions we saw stuttering and they made the experience a bit disappointing.

### Winners

XOLO Q3000 is the best performing phone in this category but it still can't outperform the Moto G and therefore, misses out on the best performer award. We gave the Best Value award to the Karbonn Titanium X as it is available for about ₹15,000 but includes features that are ordinarily seen only in the high-end category of smartphones. The Lenovo P780 is the editor's pick this time as it has a great design and to complement that it also has a huge 4000mAh battery which lasts for almost a day and a half of normal usage. **1**

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# Bazaar

## THE LATEST PRODUCTS REVIEWED FOR YOU

The Digit Test Centre receives hundreds of products every month. Each of these products is put through a series of tests and is finally given a score. The final score is arrived at after considering a number of factors and evaluating them in terms of features, performance, value for money, build quality, and, in the case of software, even ease of use.

For better understanding of our ratings, here's a quick guide to our overall score



**Extremely poor product.**  
Keep away!



**Strictly OK.**  
Not recommended



**Decent product.**  
Go for it, but there may be better products out there.



**Very good product.**  
Highly recommended.



**Ground-breaking product.**  
We've never seen anything like it before.  
A definite must buy!

Page **102** ▶  
CMStorm  
Mech



◀ Page **102**  
Rapoo T6



Page **103** ▲  
Motorola Moto G



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Amazon Kindle  
PaperWhite



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TouchSmart



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G16

## PLUS

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- 102** | Amazon Kindle Paperwhite 2013
- 104** | Nokia Lumia 1520
- 104** | Amazon Kindle Paperwhite 2013
- 105** | HP Pavilion 10 TouchSmart
- 106** | ASUS GTX 780Ti DC20C
- 106** | HTC Desire 700 Dual-SIM
- 107** | Nokia Asha 502
- 107** | Kyocera FS-1060DN
- 108** | CMStorm Mizar

**& MORE...**



## Apple logo banned at Sochi

Samsung one of the sponsors of the Sochi Winter Olympics wants the Apple logo to be covered at event venues <http://dgit.in/LjhPhwp>

## Bill Nye vs Ken Ham

Watch this viral video of a debate between a Scientist and a Creationist <http://dgit.in/NyeVsHam>

Bazaar

# HP ENVY 17 Leap Motion Edition notebook

## Massive laptop with a massive price tag

**S**traightaway, one thing is very clear - the 3.4kg machine is meant as a desktop replacement and lugging it around on a regular basis is definitely not an option. The design and the look of the ENVY 17 is very similar to the ENVY 15 we reviewed recently. HP's design philosophy of minimalism and straight lines continues, with a greater focus on metallic colours. It's very well-built and the materials used seem to be of good quality.

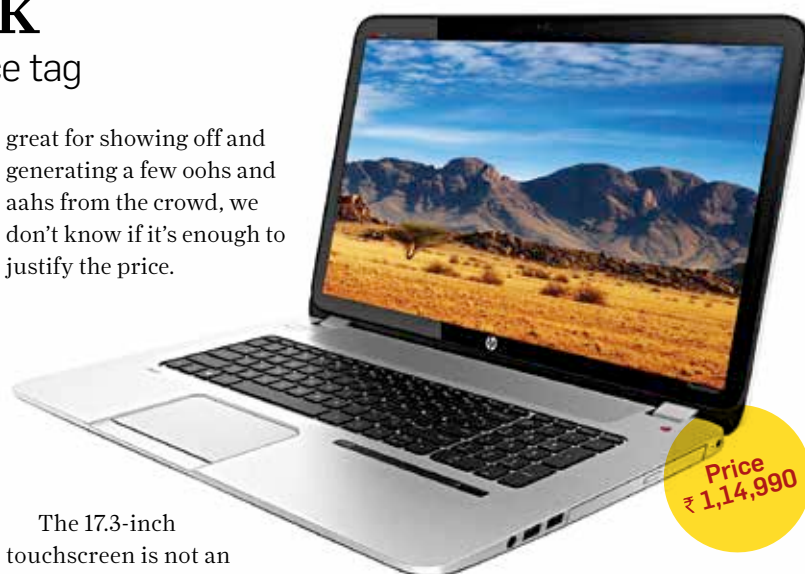
San Francisco based Leap Motion Inc. has been making sensors for PCs and Macs for quite some time now and you can buy them for any existing Windows or Mac machine for just under \$70. The ENVY 17 is the first machine to incorporate that sensor within the device itself. The sensor is seated in what is essentially a strip that sits beneath the keyboard. It uses two cameras and three LEDs to track your hand's movements. This integration is considerably smaller than the standalone version that Leap Motion sells, and is slimmer as well.

We installed the New York Times app from Leap Motion's Airspace Store, just to see how well this feature works, and the experience was rather neat. The detection range is comfortable enough for normal use without worrying about distance. In fact, if the hand gets too close to the sensor, chances are the response will be iffy. Also, the Leap Motion sensor detects ambient light sources and compensates for them. Scrolling horizontally and vertically was very responsive in the New York Times app and it's only when it came to the pointer that we found the response to be iffy, with the pointer getting a bit jittery.

While this in itself is a very cool feature to boast about and show off, you still are limited by the number of apps that are compatible. Leap Motion's AirSpace store has quite a few games, and the typical drawing and painting apps, it's clear that most of Windows' basic tasks are still not compatible with gesture control.

It's obvious that the app has potential and we would most definitely like to see this as a standard feature on laptops of the future but for now, it seems tacked on and isn't as functional as we would like. The limited apps make the function pointless except in a few instances and while it's

great for showing off and generating a few oohs and aahs from the crowd, we don't know if it's enough to justify the price.



The 17.3-inch touchscreen is not an IPS panel as we had hoped and has a resolution of 1080p. The plastic layer in front of the display is much stiffer (thicker, if that word explains it better) than the ones seen on most laptops till date. This massive beast packs in a 4th Generation Intel Core i7-4702MQ clocked at 2.2GHz; Turbo Boost takes it up to 3.2GHz. HP pairs this with 8GB of RAM and a 1TB hard drive. With a top of the line CPU, the ENVY 17 Leap Motion offers blazing performance, as expected.

Gaming performance gets a massive boost with the Nvidia GeForce GT 750M GPU, which manages 60.02 fps in the Cinebench Cinema 4D OpenGL benchmark, which is definitely a good score for a laptop.

Battery life, is a disappointment. While you are not expected to lug this notebook around from meeting to meeting, you do expect some sort of on-the-go capability, when you may urgently require it. This battery lasted just upwards of 60 minutes with the Leap Motion hardware active and waiting for input and 101 minutes with Leap Motion turned off. The large screen also takes a lot of the blame for the low battery life, but if you really do use this as a desktop replacement,

The HP ENVY 17 is an extremely powerful laptop, with top of the line specs with a 17.3" screen capable of 1080p and abysmal battery life. The motion controller is a glimpse of a future that might exist, but for now, it's a little impractical. Buy this if you want great performance or just want to show off some fancy Leap Motion action.

Vishal Mathur



Features.....	95
Performance.....	80
Build .....	85
Value .....	55

## Specifications

**Processor:** Intel Core i7-4702MQ @ 2.2GHz; **RAM:** 8GB; **Graphics:** Nvidia GeForce GT 750M (4GB); **Display:** 17.3-inch (1920 x 1080 pixels); **Storage:** 1TB; **OS:** Windows 8.1 (64-bit)

## Contact

**Hewlett Packard India Sales Pvt. Ltd.**  
**Phone:** 1800 425 4999  
**Website:** [www8.hp.com](http://www8.hp.com)





## Cupid Yoda

Listen all geeks, a Brooklyn based artist has created a cupid version of your favourite Star Wars character – Yoda, as a part of Valentine's Day cards. <http://dgit.in/CuteYoda>

## A Firefox launcher?

Mozilla gave a sneak peek of an adaptive home screen for Android. And we aren't complaining. <http://dgit.in/Mozidapt>

# CM Storm Mech

## Greatness cannot be bought for cheap



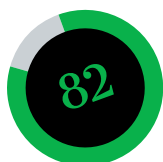
Price  
₹12,999

**A**fter testing many key-boards in the past year, we found the Vengeance K95 and K70 to be amazing keyboards for gaming. Both of them, especially the K95, gets a new heavy-weight competitor in the form of the CM Storm Mech. The Mech is massive in size and the large wrist rest along with the carry handle on the right makes it look seem even larger. This carry handle is a welcome add-on

considering that the Mech weighs about 1.6Kg. Interestingly, Cooler Master's provided an easily replaceable aluminium face-plate which can be customised by the user. Feature-wise, the Mech has five dedicated macro keys and can store five different profiles of 15 macros each. It also has three LED backlighting modes coupled with five brightness levels. The review sample we received had the clickety Cherry MX Blue switches which provide great tactile feedback. The Mech worked like a charm while gaming because of its 64 key nKRO support and it always registered our simultaneous button presses. It was also very comfortable to type on because of the huge wrist rest.

Despite being expensive, the CM Storm Mech is a very well built mechanical gaming keyboard and comes with everything that most gamers would ever need. The only real competition comes from the Corsair K95 which is a few thousand bucks cheaper than the Mech. We can't really decide between the two as they're both great. You won't be disappointed, whatever your choice.

Siddhant Sharma



Features .....	93
Build Quality .....	92
Value for money .....	63

## Specifications

**Key Type:** Cherry MX Blue  
**Mechanical keys; Actuation Force:** 50g(max 60g); **Polling Rate(in Hz):** 1000Hz/1ms; **On-board Memory:** 128k bytes; **Ports:** 2xUSB 3.0 ports, 1xmini USB port, 3.5mm audio jacks; **nKRO:** 64; **Weight:** 1686 grams; **Warranty:** 2 years

## Contact

**Cooler Master Co. Ltd.**  
**Phone:** 9820207871  
**Email:** sanket\_naik@coolermaster.com.tw

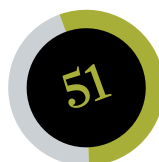
# Gigabyte H81M-DS2 Motherboard

A good board with legacy support

Price  
₹5,200



**T**his board can be used to transition towards a better system while ensuring the legacy hardware that you have isn't rendered unusable. With a COM port and a LPT port, you can hook up most legacy devices and the USB 3.0 and Gigabit ethernet port ensure that you have the fastest transfer speeds when it comes to network and peripherals. The rear i/o panel doesn't have support for 7.1 audio even though the chipset is capable of the same. Gigabyte's Ultra Durable 4 technology which this board features is always a welcome feature.



Features .....	31
Build .....	70

## Specifications

**Chipset:** Intel H81; **Memory support:** 2x1600MHz upto 16GB; **LAN:** Realtek RTL8111F Gigabit Ethernet; **Audio:** ALC887 7.1; **SATA:** 2x SATA II, 2x SATA III; **Expansion:** PCIe x16, 2x PCIe x1; **Dimensions (LxW):** 226 mm x 170 mm; **Warranty:** 3 years

## Contact

**GIGABYTE Technology (India) Pvt. Ltd.**  
**Phone:** +22-40633222  
**Email:** sales@gigabyte.in  
**Website:** www.gigabyte.in

# Rapoo T6

Touch me!



Price  
₹4,049

**T**he T6 from Rapoo is a wireless full-touch mouse with a very slim profile and a design which is quite Apple-esque. You won't see any buttons on the face of the mouse as the entire top part is a touch panel. Clicking works as a combination of touch and button press, while scrolling requires you to swipe up, down, left or right. The mouse worked well while testing as long as it was in line-of-sight with the receiver and within 10 metres. Available at a street price of about ₹2,900, the T6 is a costly offering but if you are in the market for a wireless touch mouse, you can go for this one, although you may get a better mouse at the price if touch controls are not a priority for you.



Features .....	75
Build Quality .....	76
Value for money .....	62

## Specifications

**Requirements:** Windows XP/Vista/Win7/Win8, USB port; **Connectivity:** 2.4GHz wireless; **Sensor Type:** Optical; **Battery type:** 1 x AA battery (included); **Dimensions:** 114 x 59 mm; **Working Range:** 10 metres; **Warranty:** 2 years

## Contact

**RAPOO Technologies Limited**  
**Phone:** 9899994802  
**E-mail:** sunil.srivastava@rapoo.com  
**Website:** www.rapoo.com



# Motorola Moto G

The poor man's Nexus

**M**otorola was gobbled up by Google and recently it was handed over to Lenovo. While all this was very confusing, we saw Motorola getting back in to the smartphone game with the Moto G. The smartphone has created a lot of buzz as it carries an amazing spec sheet along with a small and affordable price tag.

So what does the Moto G offer? Well it comes with a 1.2GHz quad-core Snapdragon 400 processor along with an Adreno 305 GPU and 1GB of RAM. It comes with two storage options of 8GB and 16GB however, neither of them has a microSD card expansion slot which can be a deal-breaker for some.

The touchscreen is a crisp and sharp 4.5 inch, 720p, IPS display which offers a great 326ppi and is protected with Gorilla Glass 3. The smartphone also has a 5MP rear camera with an LED flash and a front 1.3MP camera for making video calls. Other features include 3G, Wi-Fi, Dual-SIM and a 2070mAh battery to juice up the smartphone.

The Moto G runs on Android 4.4.2 KitKat, which is the latest offering by Google. Motorola has graciously not added any UI layers on top which means that the UI experience is actually very smooth and lag-free and apart from the wallpapers section, it's very similar to the other Nexus phones.



Price  
₹12,499  
(8GB)

Now that Motorola was a Google company, we expect that upcoming updates will arrive without any delays. You also get 50GB of free cloud storage on Google Drive for two years once you register on the smartphone.

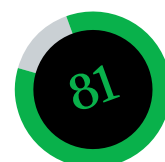
Jumping onto performance, the Moto G is quite a cracker if compared to smartphones available in a similar price range. Real-time performance and day-to-day usage proved to be very good and the smartphone didn't have any hiccups with multitasking. High end games like Asphalt 8, Real Racing 3 and FIFA 14 worked like a charm thanks to the Adreno 305 GPU. Synthetic benchmark results showed that the Moto G is quite capable of giving tough competition, even to the LG Nexus 4.

Scores on Quadrant and Smartbench 2012 were actually better and on Antutu the Moto G came very close to the Nexus 4.

In our opinion the Moto G is a very good option if you are looking for great performance in a budget smartphone and especially if you don't fancy brands like Micromax, Karbonn or Xolo. With an added brand value from Motorola, the Moto G is worth every penny.

Motorola and Google have proved that making a great phone at a low price is not rocket science and other than the somewhat iffy camera, this is among the best smartphones available in the market today. The price is just the icing on the cake.

*Kunal Khullar*



Features ..... 71  
Performance ..... 86  
Value ..... 92  
Design ..... 75

## Specifications

**Operating System:** Android 4.4.2 KitKat; **Display:** 4.5 inch IPS with 1280x720 pixel resolution; **Processor:** 1.2GHz quad-core processor; **Memory:** 8GB/16GB internal storage, 1GB RAM; **Camera:** 5MP rear with LED flash, 1.3MP front; **Battery:** 2070mAh

## Contact

**ShopYourWorld**  
**Phone:** (91) 22 6132 5050  
**Website:** <http://www.shopyourworld.com/>

Benchmark	Xolo Q3000	Samsung Galaxy Grand	Xolo Q1000s	Nexus 4	Moto G
Quadrant Standard	5718	3802	4762	4586	8540
Antutu	15485	6547	16048	17298	16556
Smartbench 2012 (Productivity)	4486	2430	4643	3200	4887
3DMark Ice Storm	3604	4235	3836	Max Score	5679





## Trouble in high places

The taller the building, the greater the challenge. What challenges? These ones: <http://dgit.in/1nZBGHA>



## Children's delight

The International Toy Fair is quite an institution. Check out the highlights from this year's show: <http://dgit.in/1e8Unbd>

# Amazon Kindle PaperWhite 2013

Definitely the best e-book reader at the moment

**O**n the face of it, the latest PaperWhite looks exactly like the previous edition. Things haven't changed on the outside but as they say, if it ain't broke, don't fix it.

The traditional e-ink displays have been often criticized for their inability to play along when you may wish to read in low light. This necessitated the need for an external light source and Amazon ruled that a backlit display would defeat the purpose of a reading device. The result was the "frontlit" display that proves that Jeff was right.

Compared to the previous generation, the updated



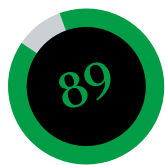
Price  
₹11,999

display is a significant step ahead. The brighter frontlight adds a lot more comfort, and pages refresh and turn a lot quicker thanks to the updated processor. The major change here is the shift from the Pearl e-ink display to the Carta e-ink display. Side by side, the difference is more than apparent. The whites now look purer and the blacks are deeper and closer to realism.

All this translates into a much better reading experience. The new display is supposed to offer 20% improvement in the reflective nature of the screen, and 50% improvement in the contrast ratio.

The best e-book reader is now even better. While not much has changed on the outside, a lot of improvements have happened under the hood.

*Vishal Mathur*



Features .....85  
Performance.....85  
Build .....90  
Value .....95

## Specifications

**Screen Size:** 6 inches; **Screen Type:** Monochrome E-Ink; **Touchscreen:** Yes, with frontlight; **Connectivity:** Wi-Fi + 3G; **Book Formats:** PDF, MOBI, TXT, HTML; **Dimensions:** 169 mmx117mmx9.1 mm; **Weight:** 206g

## Contact

**Amazon India**  
**Support:** <http://dgit.in/lpgBzLa>  
**Website:** [www.amazon.in](http://www.amazon.in)

# Nokia Lumia 1520

The Many Firsts of Windows Phone

**T**he Nokia Lumia 1520, besides being a gorgeous, sleek hunk of polycarbonate, also happens to be the first phablet from Nokia. This is a phone of "firsts" though. It also happens to be the first Windows Phone device to run on the Snapdragon S800 CPU, the first to sport a 1080p screen, and the first flagship phone to sport a microSD card slot. The icing on the cake? It's cheaper than the Lumia 1020.

This phone sports a 20MP PureView branded camera with optical image stabilization that's capable of shooting in the RAW DNG format. The images from the Lumia 1520 are incredibly good, especially those shot in the low light situations. It's not the same large sensor found in the Lumia 1020, but the Oversampling technique from the 1020 is present in the Lumia 1520's 20 megapixel sensor. Interestingly, this time around the camera takes images that are sharp in the centre as well as in the edges.

In terms of real world usage, games run buttery smooth and Halo: Spartan Assault and Temple Run are a visual treat.

Finally, the Lumia 1520 is a phone at the end of the day. The call quality on the phone was quite good. When using the earpiece, the voice quality is excellent. Switch to the speakerphone however and everything changes. It's abysmal.

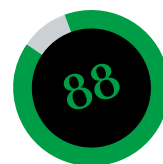
We found the Lumia 1520 to be an absolute winner of



Price  
₹46,990

a device. We love the screen, the performance, the build quality and even the camera. If you can stomach the large size of the device and you like Windows Phones, this is definitely the device for you.

*Swarnil Mathur*



Features .....85  
Performance.....90  
Design .....90  
Value .....85

## Specifications

**Processor:** Snapdragon 800 quad core CPU at 2.2 GHz; **Display:** 1920x1080p IPS LCD; **Storage:** 32GB onboard, expandable to 64GB with microSD card

## Contact

**Nokia India**  
**Support:** <http://dgit.in/ljsCe93>  
**Website:** <http://www.nokia.com/>



## Zynga!

Zynga decides to lay off employees and acquires NaturalMotion for 527 million dollars. Read on to know more: <http://dgit.in/zyngaed>



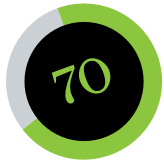
## Dark Soul of the Dead

Shaun of the Dead actor Peter Serafinowicz invades Dark Souls 2 as the voice actor for a character <http://dgit.in/ds2peter>

Bazaar

# HTC Desire 601 Dual SIM

### Too expensive to desire



Features	70
Performance	70
Value	60
Design	80

## Specifications

**Operating System:** Android 4.2.2 Jelly Bean with Sense 5 UI; **Display:** 4.5 inch IPS with 960x540 pixel resolution; **Processor:** 1.2GHz quad-core processor; **Memory:** 4GB internal storage, 1GB RAM; **Camera:** 5MP rear with LED flash, VGA front; **Battery:** 2100mAh

## Contact

**HTC India**  
**Support:** <http://www.htc.com/in/support/>

**H**TC has always produced some really good looking smartphones and this was quite evident with the new Desire series of smartphones. The Desire 601 Dual SIM falls between the 700 and the 501 and is priced at about ₹24,000. You would expect quite a bit from a phone at this price, but it doesn't meet expectations.

The smartphone comes packed with a 1.2GHz quad-core processor with 1GB of RAM, 4GB of internal memory with a microSD card slot to expand it further. The touchscreen is a 4.5 inch TFT display with a 960x540 pixels resolution and other features of the smartphone include a 5MP rear camera, a VGA front camera, dual-SIM capability, Wi-Fi, 3G and



Price  
₹24,000

a 2100mAh battery. The Desire 601 dual SIM runs on Android 4.2.2 with HTC's Sense 5 UI on top. The UI looks nice with a minimalistic approach and gives off a nice, premium feel. Apps like Blinkfeed and AccuWeather definitely catch your attention and are worth it. In terms of performance, the smartphone works well in day-to-day activities and multitasking is buttery smooth. Synthetic benchmarks however, proved that the Desire 601 Dual SIM is not very impressive, and there are much better smartphones available in a cheaper price range.

If you're looking for smart looks and decent performance, then the Desire 601 Dual SIM might be for you. It's just too expensive otherwise.

Kunal Khullar

# HP Pavilion 10 TouchSmart

### Is this the best 11" laptop?

**O**ne look at the Pavilion 10 TouchSmart, and you know that netbooks are back in fashion, though they're not being called that anymore.

This is perhaps not the best display size to work on if you're dealing with documents, spreadsheets and presentations. If the screen size limitation isn't a problem for you, then this could do fairly well for you. In the tests, this 10.1-inch touchscreen is slightly brighter than the 11.6-inch screen on the Dell Inspiron.

In the real world usage, the AMD powered HP Pavilion 10 TouchSmart feels much zip-pier than the more expensive Dell Inspiron 11. Between the two, the Pavilion 10 TouchSmart is undoubt-

edly faster too. The benchmark scores do clearly show that the 8210 lags behind the integrated Intel graphics on the Celeron 2955U in terms of sheer numbers, but it's not much to complain about in terms of real world performance.

The Inspiron 11 offered excellent battery life, clocking in at 254 minutes in our battery test. The HP Pavilion 10

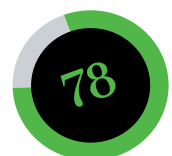
TouchSmart returns with a time of 374 minutes on a single charge, in the same test.

With a price tag of just under ₹30,000, it is tough to not recommend the HP Pavilion 10 TouchSmart. The acceptable performance, excellent battery life and the price make this a rather enticing bit for those who are looking for an affordable laptop.

Visbal Mathur



Price  
₹29,990



Features	75
Performance	75
Build	80
Value	80

## Specifications

**Processor:** AMD Dual-Core A4-1200 APU; **RAM:** 2GB; **Graphics:** AMD Radeon HD 8180; **Display:** 10.1-inch (1366 x 768 pixel); **Storage:** 500GB; **OS:** Windows 8.1 (64-bit)

## Contact

**Hewlett Packard India Sales Pvt. Ltd.**  
**Phone:** 1800 425 4999  
**Website:** [www8.hp.com](http://www8.hp.com)





## Mario meets Seinfeld

What happens when you make a Seinfeld episode with Mario characters? This: <http://dgit.in/1ep3rnD>

## Hysterical meerkats

Ever wondered what a laughing meerkat looks like? Just head over here and find out: <http://dgit.in/1e9KREv>

# ASUS GTX 780 Ti DC2OC

Decent overclock, indecent price



Price  
₹65,000

This is a factory overclocked card running at 954MHz, which is 78MHz higher than the reference card, which is a little lower than what we hoped for. It's not that ASUS can't manage a better overclock, we'll probably see beefier ROG edition cards pretty

soon. Also, the 375W that ASUS claims seems a little high for a card that's supposed to require only 250W and even if the increment is attributed to the overclock, it's on the higher side.

The build quality of the card can be said to be way better than the stock card but on par with its competitors. The Cooltech fan technology that we're seeing on most of the ASUS cards seems to do a better job of cooling down the card at the base clock, but the HOF editions from Galaxy do a better job under load, albeit a bit more noisily.

With gaming benchmarks, the results aren't that different from the competition, the graphs indicate a moderate difference in FPS scores. At ultra-configuration the ASUS GTX 780 Ti DC2OC churned out 121.73 FPS which, when compared to the 152.04 that the HOF card manages, is a bit low.

The MRP of this card is a bit high and street prices aren't available at the moment. At this price however, Galaxy's HOF edition is a better alternative.

Mithun Mobandas

# HTC Desire 700 dual-SIM

Definitely not one of HTC's better phones.

The HTC Desire 700 may not fall on the bleeding edge of chic but it's still a stylish device and is also well built. We had no real issues with the phone's performance in the week or so we used it. However, in spite of how seriously you choose to ignore benchmark performance, at some point in time, you have to look at the hard numbers.

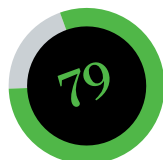
We're not exaggerating when we say that we've not come across more pathetic numbers than what we got from the Desire 700, especially held in context of how much it costs. The numbers posted by the Desire were so low that we reset the phone thinking that it had to be some kind of error. Running the benchmarks again did not give us any different results and we gave up at that point of time.

There's simply no way we can recommend the Desire 700 to anyone, at least not when it costs anything north of ₹18,000. You'll find much better deals on dual-SIM phones under ₹20,000. What if the phone was priced below ₹20,000? Yes, in that case, we would say that the Desire 700 is worth a look, since it does a lot of stuff well. But that's a moot point, because right now, the Desire 700 goes for anything between ₹22,000 to ₹31,000. Not worth it.

Nikhil Pradban



Price  
₹21,872



Performance.....90  
Value .....75  
Build .....73

## Specifications

**Chipset:** GK110; **Base clock:** 954MHz; **Memory clock:** 1750MHz; **Stream processors:** 2880; **Texture Units:** 240; **ROPs:** 48; **Manufacturing process:** 28nm, PCIe 3.0, 2560 x 1600 digital resolution support, 3GB Memory; **DirectX support:** 11; **OpenGL support:** 4.4; **Power Connectors:** 8Pin + 8Pin, TDP - 375W; **Dimensions (LxWxD):** 287mm x 147mm x 41mm; **Warranty:** 3 years extended warranty

## Contact

**ASUS Technology Pvt. Ltd.**  
**Phone:** +18002090365  
**Email:** reachus@asus.com  
**Website:** www.asus.in



Features .....70  
Performance.....41  
Build Quality.....70  
Value for money.....68

## Specifications

**Operating System:** Android 4.1.2; **Screen Size:** 5" at 960x540 pixels; **Built-In Storage:** 8GB; **MicroSD Card Support:** Upto 64GB; **RAM:** 1GB; **Camera:** 8MP; **Wi-Fi:** Wi-Fi 802.11 a/b/g/n; **Bluetooth:** 4.0 with A2DP; **Battery:** 2100mAh; **Processor:** 1.2GHz quad-core Spreadtrum Shark

## Contact

**HTC India**  
**E-mail:** <http://www.htc.com/in/contact/email/>  
**Phone:** 1800-266-3566



## Supergii supergii

The funniest supermarket commercial ever, watch this ad for German supermarket, EDEKA: <http://dgit.in/1mCAVc9>

## Weird and wonderful

The weirdest ship ever built? Find out the secret behind the world's roundest ship: <http://dgit.in/1hoCSCt>

Bazaar

# Nokia Asha 502

The best feature phone in the market?



Features .....	40
Performance.....	60
Value .....	90
Design .....	80

### Specifications

**Display:** 3 inch TFT with 320x240 pixel resolution;  
**Processor:** 1.1GHz single processor; **Memory:** 512MB internal, 64MB RAM;  
**Camera:** 5MP rear with LED flash; **Battery:** 1010mAh

### Contact

**Nokia India**  
**Support:** <http://dgit.in/ljsCe93>  
**Website:** <http://www.nokia.com/>

Nokia has maintained its reputation in the low budget feature phones with its Asha series of handsets by bringing in some brilliant features at an affordable price. The Asha 501 was a nifty little phone and Nokia has now upgraded it with the 502 that comes with some extra protection thanks to a transparent shell around the back panel.

The phone features a 3 inch capacitive touchscreen with a 320x240 pixel resolution, Wi-Fi, dual SIM slots, a 5MP camera with LED flash, a microSD card slot (4GB card bundled) and a 1010mAh battery. The phone comes in a variety of vibrant colours including Bright Red, Bright Green, Cyan, Yellow, White and Black.



Price  
₹5,700

With the new Nokia Asha software platform 1.1, the Asha 502 offers a simple looking UI which includes swipe gestures to get around the device. You get a standard grid menu layout which includes all your apps and settings, and if you swipe left or right you get a timeline of all the events, apps and actions that you performed on the phone. The phone comes preloaded with apps like Facebook, Twitter, Whatsapp and a bunch of games which keep you entertained.

If you don't fancy Android smartphones in the low budget segment, then the Asha 502 is a great recommendation from us.

Kunal Khullar

# Kyocera FS-1060-DN Printer

A functional device



Printers are a very functional category. Their only function is to print and as long as they perform that function well and cheaply, we don't really care. The Kyocera FS-1060DN

is exactly that type of printer.

It's a staid black-and-white box that you can place in a corner of your office and just forget about, and when it comes to printers, that's a very good thing.

It's reasonably quiet, prints without any fuss and just works. It does have issues with heavy files where the print speed does slow down considerably, but these are rare instances and for printing regular documents, this is more than capable. Print times are very decent at about 14 seconds for a 6-pg

document and 28 for a heavier one, which is just about average in this category.

Printing costs are also quite low for this device, with the cost of ownership falling well below the

two rupee mark for a three year period based on our rating system. Print quality is nothing to write home about; the quality is exactly as you would expect from a laser printer. Nothing extraordinary, but nothing bad either.

If all you want is a basic and functional printer, this printer might just be the one for you. But then again, there's no particular reason

why you should pick this one over something from some other brand either.

Anirudh Regidi



Price  
₹9,500

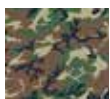
Features .....	75
Performance.....	70
Value .....	85
Design .....	70

### Specifications

**Type:** Monochrome laser printer; **Speed:** 25ppm; Max. resolution: 1200dpi; **Warm-up:** 16sec; **Dimensions (WxDxH):** 358x276x241mm; **Weight:** 6.7kg; **Input tray:** 250 pages; **Output tray:** 150pages

### Contact

**Kyocera Document Solutions India Pvt. Ltd.**  
**Phone:** 1800-103-7172  
**E-mail:** [contactus@did.kyocera.com](mailto:contactus@did.kyocera.com)  
**Website:** <http://kyoceradocumentsolutions.co.in/>



## Ultimate camouflage

WWII saw the americans cover an entire air-force base in camouflage netting. A remarkable feat of engineering. <http://digit.in/1jtjnKV>

## What you pointin' at?

Do you have an overwhelming urge to point at something? If you do, just head over to: <http://www.pointerpointer.com/>

# Canon PowerShot G16

The much awaited upgrade to the G15

**T**he Canon PowerShot G16 is the latest release from Canon in the advanced point and shoot category and is a long awaited update to one of our favourite cameras, the G15. There's not much new here, except for the sensor and a few changes here and there. It feels more like an incremental release rather than a major update, but it's still a pretty interesting little camera.

For starters, while Canon has maintained the 13.2MP resolution, the regular CMOS sensor has been upgraded to the BSI class. While the resolution has technically been bumped up, the effective resolution of the output images is still 12 megapixel because the remaining 1 megapixel is being used as phase detection pixels. The added phase detect pixels have led to the



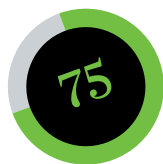
consistent with the performance of the G15 as well, seeing how the two cameras employ the same lens. Things take on a much different shade when shooting in low light though. We had expected that since the G16 rocked a BSI sensor, the low light performance would be noticeably different from that of its predecessor, but that turned out to not be the case.

We took a bunch of photos at ISO 3200 and noticed quite a few issues. Firstly, there was noticeable noise, but the good thing is that it wasn't the ugly red and blue dots. The noise we saw in our images was more of grain, which would have been okay if it was fine grain. The second issue we noticed was a strong drop in contrast coupled with a slight colour shift. The good thing, however, was that the colour shift could be recovered and contrast fixed, but what it does mean is that you're absolutely going to have to shoot RAW to make it all happen..

In terms of image quality, the G16 isn't leaps and bounds ahead of the G15, regardless of the BSI sensor. However, what has improved quite a bit is the focusing system, which in of itself is a pretty solid reason to buy this camera. While the IQ may not be much better than its predecessor, the G16's images are still incredibly good, coming from the tiny 1/1.7" sensor.

G16 being a very competent at auto focusing. We tested the camera in several lighting conditions, such as bright day light, night time, pitch dark, shooting at a high contrast target, shooting at a low contrast target etc and found that the only time the camera's focus system hit a snag was when shooting in very low contrast situations. This is when we were shooting with the camera in very little light, and while there was some contrast on the subject we were trying to get it to focus on, it just wasn't enough. faltering in this area is not surprising, as even most DSLRs struggle in such lighting conditions.

The image quality department threw up a few surprises. The camera comes with a BSI-CMOS sensor, which should ideally help the camera under low light conditions, etc. During our daylight test, the G16 did a splendid job with colour reproduction and contrast. Shooting in JPG mode (it can shoot RAW too). The images are incredibly sharp, something that's



Features .....80  
Performance .....70  
Value .....70  
Design .....80

## Specifications

Sensor: 1/1.7" 13 megapixel BSI-CMOS Sensor; Lens: 28-140mm f/1.8-2.8; Shoots Raw: Yes

## Contact

Canon India Pvt Ltd  
Phone: 0124-4160000

# CM Storm Mizar

Is this the czar of gaming mice? Probably not.



**M**ade for right handed gamers, the Mizar has an Avago 8200 DPI laser sensor. The design of the Mizar is pretty basic with no unnecessary modifications, making it a comfortable mouse to hold. The body is almost entirely made of plastic but the mouse has rubber strips on the sides for improving grip. The Mizar comes with seven programmable buttons. It tracked well in games without any hiccup but has no weight management option. Overall, the Mizar is a good gaming mouse but you may find better options, including the Roccat Kone Pure in this price range.



Features .....69  
Build Quality .....73  
Value for money .....65

## Specifications

Switches used: Omron key switches; Sensor: Avago 9800 laser; DPI: 8200 DPI; Polling Rate: 1000Hz; Onboard Memory: 128kb; Acceleration: 30 g's; Weight: 121 grams; Cable: 1.8 metre braided; Warranty: 2 years

## Contact

Cooler Master Co. Ltd.  
Phone: 9820207871  
Email: sanket\_naik@cooler-master.com.tw

Swapnil Mathur



# worldview

OUR PICK OF THE BEST TECH ARTICLES FROM AROUND THE GLOBE

## (MUST READS)



### WERE THE BEATLES OVERRATED?

The Beatles are often regarded as one of the greatest bands to have ever existed. They enjoyed a massive and loyal fan following, sold more records than any other artist, and were accorded demi-god status in their prime? But did they really deserve the adulation bestowed upon them? A detailed critique of The Beatles dissects their fame.

<http://dgit.in/wvbeatles>

### OPEN SOURCE SOFTWARE = UNPAID LABOUR

Open Source Software is almost universally acknowledged as a good thing, and to the distant observer it is. Some of the largest software projects in the world are completely open source, and with good reason. However, judging the merit of programmers based on their contribution to Open Source Software may be a bad thing, as it neglects ethnic minorities and those without access to better financial and educational facilities.

<http://dgit.in/wvopensource>

### "TYPING..."

One standard feature of Instant Messaging apps today is the "typing..." feature, where the recipient is notified when the sender is typing out a message. This seemingly innocuous feature has become central to the social aspect of online communications. You see see "typing..." for too long, and some awkwardness ensues.

<http://dgit.in/wvtyping>

## [The Verge Corner]

### FANBOYS - WHEN TECH BECOMES A RELIGION



Spend a few minutes on the comments section of any tech website, and you'll see accusations of 'fanboyism' being thrown about. For when a geek grants his preferred tech company godlike-status, logic and civility are forgotten, only to be replaced by fervent fanaticism. Love them/hate them, but you surely can't ignore them! <http://dgit.in/vergefanboy>



#### AM Radio - an endangered species

In this age of Internet based music streaming, the age-old radio seems to be losing listeners. The age-old Amplitude Modulation or AM radio (which predates even FM), used to broadcast over long distances, seems to be dying out.

<http://dgit.in/VergeRadio>



#### Killing trolls with robots

Trolls on the internet are nothing new. But what happens when trolls enter the world's largest community-contributed encyclopaedia? Guarding the pages of Wikipedia from troll-editors are bots - programs that can recognize and stop troll-behaviour.

<http://dgit.in/vergetrolls>



#### The World of Flappy Bird Clones

Flappy Bird, the frustratingly difficult, yet surprisingly popular game was pulled from both the Play Store and the App Store last month. To fill the ensuing void, clones of the game have started popping up all over the web, vying for your attention.

<http://dgit.in/vrgflapp>

**WHAT'S IN A NAME?**

Twitter user-names are lucrative words – if you signed up early you probably got your real name or a simple word. New users are not so lucky. Case in point - Twitter user @n whose account was hacked after he refused to sell his username for \$50,000.  
<http://dgit.in/wvtwttr>

**ANDROID BLOATWARE - A THING OF THE PAST?**

Anyone who's ever used an Android phone is familiar with the bloatware that comes pre-installed that offer little or no value. But now a South Korean court has mandated that it should be possible to delete any such bloatware.  
<http://dgit.in/wvbloat>

**GOOGLE RANKING ISPS BASED ON YOUTUBE**

The days of cursing your ISP over choppy YouTube videos may soon be over. In a move that'll force ISP to pull up their socks, Google has decided to rank them based on their ability to consistently deliver HD videos to customers. ISPs that pass the test will be YouTube HD-Certified.  
<http://dgit.in/wvISP>

**PRINTING A CAR? SURE!**

3D printing seems to be pushing the boundaries of science, allowing us to "print" virtually anything, including food products, guns and even prosthetic limbs. Adding to this list is Honda, who will release 3D printing data for its Acura concept car.  
<http://dgit.in/wvHonda>

SHORTS

## The best WhatsApp alternatives for your smartphone

Now that Facebook might be in control of your data, perhaps it's time to look for some alternatives for your messaging needs

Despite the fact that WhatsApp has more than 450 million users globally and the 19 billion buyout by Facebook, not everyone we know loves the Instant Messenger client. Some cannot be bothered to be "connected" with everyone who is in their mobile phonebook while others do not like the fact that WhatsApp isn't really very private, because just about anyone can send them a message unless specifically blocked. Add to this the fact that Facebook, a company that's not had a clean record when it comes to user's privacy, now own it, its best to err on the side of caution and jump ship. The app does lack a bit of sophistication as well, when compared to some of the rivals that sport better UIs and slicker deployment of features. And, all these faults could be forgiven except for the fact that it isn't free once you finish the complementary usage period.

So, what is the alternative? Well, there are many, actually. We handpick three of the best ones for you to switch to. And before you send any brickbats our way for not including Facebook Messenger or Google Hangouts, or similar apps, we did not want to confuse matters by making you switch to an IM app that piggybacks on a full-fledged social network. Simply because, what we are looking for through this exercise is a replacement for WhatsApp, which was in turn a replacement of the plain and simple SMS and similarly relies on phone numbers instead of online identities.

**BlackBerry Messenger**

**Price:** Free

**Available for:** BlackBerry, iOS and Android

**Download:** <http://dgit.in/bbmdl1>

It wasn't a long time ago that BlackBerry smartphones boasted of BlackBerry Messenger (BBM) as an exclusive feature. However, that has changed, and you don't need to be on the BlackBerry platform anymore to use BBM or connect to your friends who use the client. The app is now also available for Android and iOS platforms, and BlackBerry has often mentioned that it will also be available for Windows Phone soon. The Android and iOS versions are fairly stripped down at the moment, with just basic chatting available, but it is expected that these two versions will also get voice and video chat features in the near future, bringing them at par with the version that currently runs on BlackBerry 10 devices. And BlackBerry, FYI, we would love the screen share feature as well.

What we really like is the fact that not anyone and everyone can contact you

through BBM. The PIN based friend list population means you have better control over who ends up there and who doesn't.

**Hike**

**Price:** Free

**Available for:** BlackBerry, iOS, Android, S40 & S60 and Windows Phone

**Download:** <http://get.hike.in/>

This is one app which took on the challenge of dealing with a crowd of very similar apps, and has emerged from the slugfest stronger and much more polished. For starters, the interface has been tweaked for the better, and retains its visual appeal while remaining very functional. Not to be left behind, stickers are also available for you to use, if words don't offer the same mileage. Hike has a rather unique feature, it sends your message as an SMS in case the other participant goes offline for some reason, and the reply to that SMS will arrive in the same chat window within Hike. Do note, this is limited to contacts based out of India only. The "last seen" feature may be



## FACEBOOK'S ACQUISITION OF WHATSAPP



Last month's biggest news story was Facebook's acquisition of Whatsapp for \$16 billion. Just why did Facebook choose to spend such a huge amount on a paltry messaging app? Sequoia Capital, the sole investor in Whatsapp, gives some numbers <http://dgit.in/wvWhatsapp>

## ARE YOU DATING YOUR SMARTPHONE?



Smartphone owners' lives are almost controlled by their phones. It's the first thing we check in the morning and the last thing before sleeping. Here's some hilarious signs that you may be dating your phone! <http://dgit.in/wvsmartphone>

## WHATSAPP ISN'T AS HUGE AS YOU THINK

While Facebook's acquisition of Whatsapp for \$16 billion seems to have shocked the Western world, regions like India where Whatsapp reigns supreme may be a little confounded. After all, WhatsApp IS the de-facto mobile messaging app right? Turns out, it's not; at least on a global scale. <http://dgit.in/wvWhatsapp>

## CREATIVITY FROM SCRAP



Argentinean artist Elisa Naranja Metalica Insua uses everyday trash – ranging from disposed computer motherboards, coins, etc, to make wonderful art. Some of her masterpieces include Darth Vader, a dinosaur from Jurassic Park and the lion from the MGM commercial. <http://dgit.in/wvtrash>

fairly WhatsApp-ish, but Hike limits that information to just the contacts you have added to the friends list.

Quite frankly, we really like the simple interface, and yet Hike remains fairly feature rich. This can pretty much be the solid second IM app that you should have on your phone.



## Viber

**Price:** Free

**Available for:** BlackBerry, iOS, Android, Bada and Windows Phone

**Download:** <http://www.viber.com/>

This started out in life as a video calling application, and many people tend to compare this to Skype. However, unlike Skype which was first built for the desktop and then made its way to the mobile platform, Viber was built to be on mobile first and later the desktop client was also made available. One of the neatest apps for video calls, recently expanded into text chatting, complete with groups and stickers! It's a bit like WhatsApp in one aspect – it scans your contacts list on the device to let you know which of your friends are using Viber.

Video calls to Viber friends are free, and the ability to set favorites saves the pain of scrolling through the entire contacts list every time. Plus, the video calls can be made

on Wi-Fi or 3G, which can be a massive help just in case one of the other networks isn't around or you don't want to rake up a huge data usage bill.

## WeChat

**Price:** Free

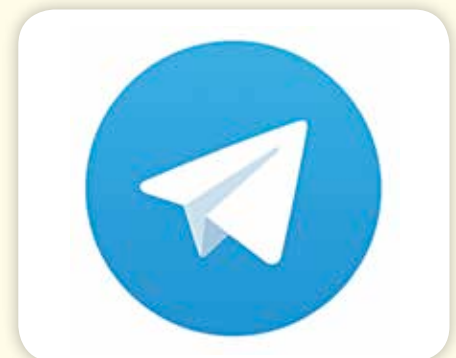
**Available for:** BlackBerry, iOS, Android, S40, and Windows Phone

**Download:** <http://www.wechat.com/en/>

Last year when WeChat launched, it had a 190 million strong active user-base worldwide but didn't have too many Indians using the service. Its voice messaging feature or 'Hold-To-Talk' as it's called is supposed to be a feature unique to WeChat while Moments allows WeChat where to post images or text and share with their selected friends in a secure way. One of the best things is that the app is committed to remaining free. It has a host of features such as Live Chat which allows you chat in a group using voice. Members in the Live Chat will hear you immediately. Only one person can talk at a time though. Another interesting feature is chat history backup. This allows you to backup your chat history and restore it to your new device. Shake, Lookaround and Drift Bottle are features that help users make new friends. Shake connects you with people shaking the phone at the same time. Creepy, yes, but



might be fun if you're bored. Drift Bottle lets you "Throw" or send out a voice or text message. You then wait to see who will pick up your bottle and reply. Lookaround is simply a location based search of people using WeChat nearby.



## Telegram

**Price:** Free

**Available for:** iOS and Android

**Download:** <https://telegram.org/>

The telegram slogan itself is "Taking back our right to privacy" so you can pretty much guess that the focus of this app is security and maintaining the integrity of your data. In terms of its interface it's a clone of WhatsApp with your standard activation process and things like "last seen" and a set of emoticons. It doesn't have the ability to record and send voice messages like WhatsApp nor does it have status messages. Maybe these are frivolous features compared to its core focus – things like encryption and self-destruct ability for your messages. It has an open API and protocol free for everyone. At least on paper it claims to have no limits on the size of your media and chats. To top it all off Telegram aims to be free forever. No ads. No subscription fees. What more could you ask for?



## CGP GREY

Explaining confusing concepts, anomalies, myths and theories in a clear, lucid way is CGP Grey, a Youtube channel



that uses short, instructional videos to explain concepts like the difference between England and United Kingdom, the difference between Holland and the Netherlands, the US debt limit, and why using pennies is not worth the time or the effort.

<http://dgit.in/wwCGPGrey>

## (QR Code)



For a list of all the links from this section, head over to <http://dgit.in/wwmar2014> Or point your phone to the QR code above

## (PRODUCT LAUNCHES)

### LG G2 MINI



LG officially announced the mini version of its popular flagship phone - titled the LG G2 mini. Featuring a 4.7-inch qHD display, 1GB of RAM and a quad core processor running Android 4.4 Kitkat, the phone is targeted at the mid-tier segment.

### AMAZON KINDLE PAPERWHITE (2013)



The second iteration of Amazon's massively successful eBook reader finally saw an India launch last month. Priced at ₹10,999, the Paperwhite features an improved display with better contrasts and a faster processor.

### LENOVO YOGA 2 PRO



Lenovo's newest ultraportable is a laptop with a screen that swivels over to reveal a tablet-like form factor. It ships with Intel's new generation of Haswell processors, giving it an impressive battery life of more than 6 hours. It's approximately priced at ₹65k

## WORD JUMBLE

H	A	X	F	Z	F	G	A	F	Y	Y	S	S	N	U	E	P	E	T	A
X	I	X	U	W	J	E	A	W	A	T	C	H	O	N	S	T	C	I	U
T	R	I	L	U	M	I	N	O	S	E	K	T	C	J	H	L	B	L	H
P	P	X	L	Z	Z	U	B	L	E	Q	Y	X	U	G	Y	D	S	T	U
H	L	H	H	N	D	C	F	U	S	I	O	N	D	R	I	V	E	N	T
A	A	H	D	H	V	S	J	C	K	N	G	C	I	X	Q	Y	Y	O	F
B	Y	D	P	P	U	R	E	V	I	E	W	S	P	H	Q	I	H	R	R
L	Q	U	I	F	C	I	N	H	K	B	I	M	D	K	J	S	I	F	C
E	K	X	L	H	T	N	G	Q	K	G	L	F	R	E	Y	R	D	K	L
T	J	U	H	Q	C	W	O	Y	H	A	C	U	J	D	G	B	H	U	Y
N	D	U	I	M	E	U	B	T	M	C	L	E	A	R	B	L	A	C	K
G	P	D	I	O	R	R	O	Y	R	X	T	E	S	J	K	G	R	R	T
T	O	R	P	J	I	X	K	T	V	S	T	R	V	X	B	Z	T	E	B
B	Y	M	D	L	D	F	P	R	O	S	K	U	U	Y	S	Z	L	V	C
H	Q	A	S	D	R	E	T	I	N	A	W	F	R	M	J	O	U	E	D

ABSOLUTE  
TIMEPASS

There are 15 technology terms hidden in this word grid. Find them all.

## Top 3 YouTube Picks

Make sure your boss doesn't catch you goofing off with one of these videos playing on your screen



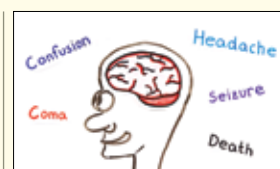
### Predicting future with sci-fi

It's quite impressive to see that most of today's exciting technologies were predicted years or even decades ago - by science fiction writers. <http://dgit.in/wwscifi>



### We ate all your candy

Jimmy Kimmel asked his viewers to prank their kids by telling them they ate all of their halloween candy and record their reaction. <http://dgit.in/wwcandy>



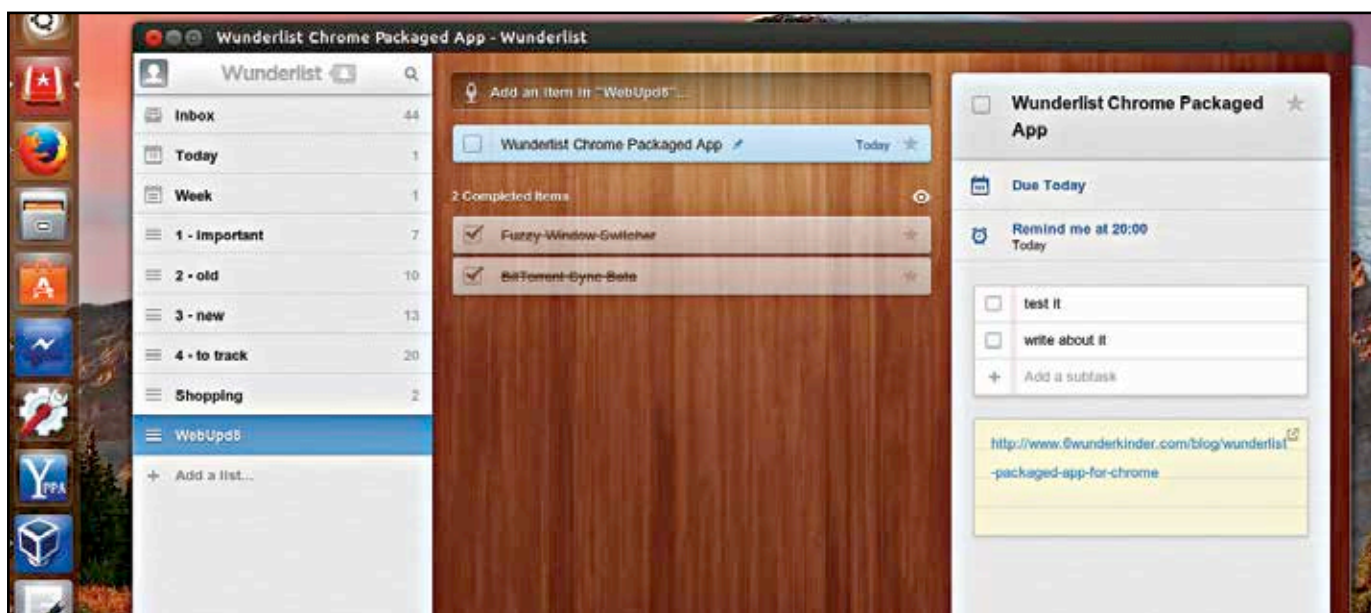
### Drinking too much water?

Water is great and so essential for your body. Drinking water is deemed healthy, but is there such a thing as drinking too much water? <http://dgit.in/wwdrinkwater>



# Build an installable Chrome Packaged App

>>A quick guide on programming the address bar of Chrome using JavaScript> By Ashesh Lal



Wunderlist is an excellent example of a popular Chrome packaged app.

To address the ongoing need for cross-platform applications, Google is attempting to emulate smartphone apps to build more user friendly web applications running directly from a browser. An application running inside a browser typically has its own dedicated UI coupled with rich user interaction. These could include games, photo editors or even video players that run inside the browser. 'Chrome Packaged Apps' or 'Chrome Apps' are installable web apps that are available for download on the Chrome Web Store and behave like a fusion of extensions and hosted apps. Packaged Apps don't share the Chrome interface (unlike extensions) and allow hardware devices, such as your camera, to be utilised over TCP/IP (Network), USB and Bluetooth by giving additional privileges to the application, making web apps behave like desktop apps. The capabilities of Chrome apps include desktop

notifications – hard to imagine with a browser as the platform even just a few years ago.

Without diving into any more detail, let's get into the essence of this article and make our first packaged app for Google Chrome. The app will show programmability of the Omnibox – Chrome's address bar. It will also demonstrate how the Omnibox uses keywords such as "wiki" and "facebook" to allow access to the search engines of these respective sites and provide suggestions to the user.

## What you will need:

1. An active internet connection;
2. Text editor: Sublime Text 2 with Chrome Apps plug-in;
3. Basic JavaScript knowledge;
4. \$5 or ₹310;

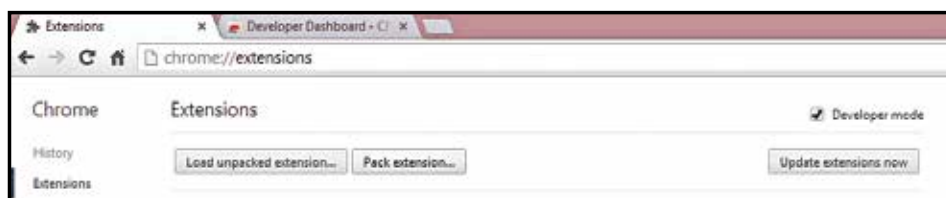
5. A Google account (preferably a dedicated account for development purposes);

### Let's start!

1. Launch Sublime Text 2
2. Go to Tools > Command Palette... [Ctrl]+[Shift]+[P]
3. Search "install"
4. Click "Package Control" and install Package (If you don't have Package Control, you can get it from: <http://dgit.in/1f4RWBN>)
5. Search "Chrome" in the Package Control dialogue box
6. Click "Chrome Apps and Extensions"
7. Notice a new tab on the right side of Help called "Chrome"
8. Go to Chrome > New App... > Hello World!
9. Three files are created. Save each of them in the same directory to enable colour-coding. (These three files are typical to any packaged app on Chrome.



This is how the Developer Dashboard looks like.



The Extensions page in Chrome.

For our purposes, we'll need only two files: manifest.json and background.js

### manifest.json:

```
{
  "name" : "Digit",
  "description" : "To use, type 'digit' [space] &
    a search term into the address bar.",
  "version" : "1.0",
  "background":
  {
    "scripts" : ["background.js"]
  },
  "omnibox" : { "keyword" : "digit" },
  "manifest_version" : 2
}
```

The manifest describes meta-information about your application such as name, one-line description, version number (to avoid duplicity between updates) and additional information

on how to launch your app and privileges associated with it. Manifest version 1 has been deprecated and is no longer available for use. You can find out more about the manifest file at <http://dgit.in/1fhVdni>

### background.js:

```
//This event is triggered when the user changes
the input in the omnibox.
chrome.omnibox.onInputChanged
  addListener(function(search, suggest)
{
  console.log('Input Changed: ' + search);
  suggest
  ([
    {content: text + " change1", description:
      "first suggestion"},
    {content: text + " change2", description:
      "second suggestion"}
  ]);
});
//This event is triggered when
the user accepts the input in
the Omnibox.
chrome.omnibox.onInputEntered.addListener(
function(text)
{
  console.log('Input Entered:
    ' + text);
  alert('You searched for "' +
    text + '"');
});
```

The Omnibox module is utilised in this code to run as a background script, since the application doesn't have its own dedicated UI. The two functions called in the code are essentially event listeners that are triggered

when the input is changed or entered into the Omnibox. Both the functions are defined using anonymous function definitions. "console.log()" function is used to show output on the development console and not to the user. "suggest()" function accepts an array and can be programmed to receive its data from a large website equipped with search engine capabilities. It accepts data with two parameters, that is 'text' – the corresponding replacement text for each suggestion in the Omnibox that changes the input in the address bar when any suggestion is hovered over and 'description' – the suggestion option that appear in the Omnibox, which could even be the title of a webpage. When the user accepts the search text by hitting [enter]. The alert() function displays a pop-up confirming that the Omnibox is accepting the input from the user.

10. Once you've completed saving the two files in a folder, open the Chrome browser
11. Go to Options -> Tools -> Extensions or type "chrome://extensions/" in the address bar
12. Make sure Developer Mode is checked



13. Load Unpacked Extension...
14. Browse to the folder containing the files and Click "OK"
15. Refresh the browser and launch the application
16. Open a new tab and test your application
17. To upload the app on the Chrome Web Store, go to <http://dg.it.in/lgovEh1> and sign in using your developer account.
18. The folder containing the files of the application needs to be converted to .zip format. Use any freeware such as WinRAR or 7-Zip to do this.
19. On the dashboard of the website, click on "Add New Item".
20. Accept the Terms & Conditions.
21. Click on "Choose File" and upload the .zip file.
22. Your application will be uploaded on the Chrome Web Store following payment of a one-time developer's fee of \$5. You can also distribute your application in the .crx format for free by using the option "Pack Extension..." at `chrome://extensions/` To install a .crx file, just drag-and-drop the file onto Chrome.
24. If you intend on earning through your application, get a Google Checkout Merchant Account by following the steps at: <http://dg.it.in/1hCoLxU>. Read the branding guidelines at: <http://dg.it.in/Mh30tH>
25. Before uploading your application on the store, you'll need to provide a detailed description of your app, screenshots or a video explaining the app, a primary category for the app and a small tile icon (16px square) for the Chrome Web Store wall.
26. Once your application is uploaded onto the Chrome Web Store you'll get an App ID and a file with the private key of your application for authentication purposes.
27. Follow the guidelines for publishing to test accounts and publishing to the world at <http://dg.it.in/1myIgJR>. For more information about updating and uploading the app on the Chrome Web Store, go through the article on packaging at <http://dg.it.in/1eeo71H>. There's also an exhaustive step-by-step guide along with a checklist available at <http://dg.it.in/1h6v4q8> for launching your application.

## \*Some resources for support

- >> **Quick Chrome Apps tutorials** (<http://dg.it.in/MJjQgF>) – Once you're comfortable with the idea of developing Chrome Apps, you can learn more about creating them at Google's Codelab. You can make your own "to-do" app using HTML5 and cloud storage.
- >> **Other JavaScript APIs** (<http://dg.it.in/1h6wyAD>) – Also, do check out other APIs within the Chrome environment (chrome.\* APIs) to learn more about the modules provided by Chrome for application development.
- >> **Other Web APIs** (<http://dg.it.in/1f4SgQX>) – You can also use external APIs such as JQuery by bundling them with the application. Find more information on other APIs at the given link.
- >> **Developer's guide for Chrome Apps** (<http://dg.it.in/1myFjZQ>) – Here information about all current modules can be found.
- >> **Sample code for Packaged Apps** (<http://dg.it.in/1p2MBnh> and <http://dg.it.in/1fnAqgB>) – Sample codes can be found on the Chromium website.
- >> **Query support** (<http://dg.it.in/1cyEslp>) – You can post any queries at the Stack Overflow forum.

### Final word of advice

Google's own applications such as Google Keep and Google Hangouts, and popular applications such as ANY.Do, Wunderlist and Pocket have been developed using this technology and are now available for offline purposes as Packaged Apps only on Chrome.

Chrome Apps are surely going to be under heavy development over the next few years or so. So, waste no more time and start coding to get a piece of the action before there's way too much to learn. >

## \*the source code



### Chrome 33

>>The latest Chrome update removes the developer flag to disable the "Instant Extended API" that powers the "New Tab" page.  
<http://dg.it.in/Chrome33>



### Programmers Heaven

>>It's a great website for sample code which has its own articles, links, forums and posts about everything a programmer needs.  
<http://dg.it.in/CodeHeaven>



### What exactly is responsive web design?

>>A group of web developers lay out pointers on how to approach web design in a better manner.  
<http://dg.it.in/DesignHow>



>>Roll out of Facebook's Graph Search to mobile platforms seems imminent as the company starts testing the new search with select users.> **By Team Digit**

Facebook has been long rumoured to expand its improved search feature, also known as Graph Search, to mobile platforms. And now Facebook has finally started testing out Graph Search on mobile devices, with select users.

Mashable reporter Seth Fiegerman, first spotted the change and posted the screenshot of the new interface – which heavily resembled to web version of Graph Search.

#### What is it all about?

Facebook had launched Graph Search for web users last year. Graph Search focuses on four core points - people, places, photos and interests. Recently, Facebook added posts and status updates in the Graph Search. The search aims to deliver more relevant information and images on the social network.

Despite mobile being a top priority, Facebook hasn't launched a mobile version of the Graph Search as of yet. Facebook CEO Mark Zuckerberg during the recent quarter earnings call explained why Facebook hadn't rushed to roll out the Graph Search on other platforms.

He was quoted saying: "We're really early in the game on [Graph Search]. You can see that because we haven't even really rolled out our mobile version of Graph Search yet and we're a mobile company. Pretty soon, you should expect us to roll

out the mobile version of this. I think that's going to be an important step because most of the usage of Facebook overall is on mobile," he said.

Rolling out Graph Search to mobile devices will help Facebook analyse the things its users are interested, and help determine what's hot on the social network much more precisely. Graph Search will make it much more easier to find things on the social network if you take a look at it from a users perspective and help engage in more activities on the network.

#### How does Graph Search work?

Since Facebook Graph Search is a semantic search engine, it is developed in such a way that it has the ability to provide answers to natural language queries. The basis for this is the use of development in the field of Natural Language Processing.

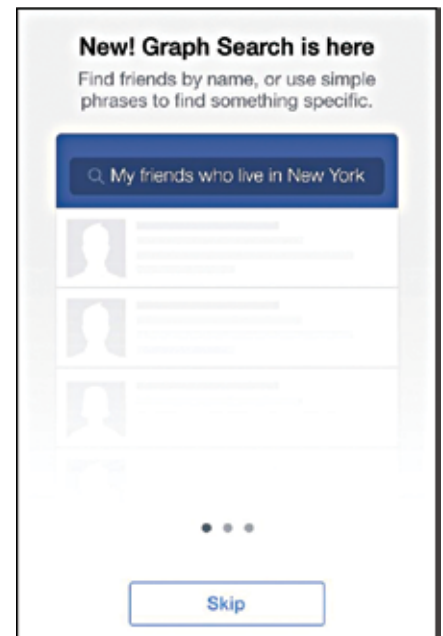
Basically, Facebook's Graph Search feature uses a combination of data that Facebook has gained over time from its huge user-base and the data available externally from its primary search engine to provide results pertaining to the user itself. The results that are generated using Graph Search are based completely on a user's friend network. This type of search promises results that will always relate to the user in one way or another.

Search bar entries get auto-completed as users type their queries into it while Facebook suggests pages, related topics, second degree connections and also web searches to provide the you with a result

even before you may have completely gathered your thoughts on the query.

#### The bigger picture!

Google, Microsoft and Apple have all been successful in their attempts at running NLP applications on the mobile landscape



A screen grab of Graph Search for mobile

but with Graph Search for mobile, Facebook can now provide something that can be a turning-point for search as a whole.

Though this is all still under development and would require some time to flourish, it's still something new to build upon. Let's wait and see how it pans out. >

## \*coding matters



#### HTML 5.1 coming up

>>The World Wide Web Consortium (W3C) is said to be working on readying draft specifications for HTML 5.1. All of this revolves around a debate involving the inclusion of a main element to represent the main content section of the body part of an application or document for HTML5 development.

<http://dgit.in/HTMLMainElement>



#### MySQL 5.6 released

>>Oracle's MySQL - the immensely popular open source database management system received an update recently which added many new features and capabilities that were overdue from some time now. Most of the new additions to this RDBMS have been available on MariaDB from long ago.

<http://dgit.in/MySQLnew>

# digit KILLER RIGS

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## BASIC RIG

Processor	Intel Pentium G2020	3,600
Motherboard	Gigabyte GA-H61M-D2H	3,657
RAM	Corsair 2GB DDR3 1333MHz	1,600
HDD	Seagate Barracuda 500GB	3,290
Monitor	AOC E2043FSK	6,570
Graphics Card	None	0
Cabinet	NZXT Gamma	2,490
PSU	Corsair VS450	2,268
Speaker (2.1)	Creative SBS A120	1,550
Optical Drive	Samsung 22x SATA DVD Writer	950
Mouse	Amkette Ash Black (Bundle)	500
Keyboard	Amkette Ash Black (Bundle)	0
Sound Card	None	0
<b>Total</b>		<b>₹26,475</b>

## HTPC

Processor	AMD A8-5600K	6,955
Motherboard	MSI FM2-A75MA-P33	4,423
RAM	Kingston HyperX Blu DDR3 4 GB	3,900
HDD	Western Digital WD20EZRX 2TB	6,275
Monitor	None (your TV)	0
Graphics Card	None (HD7560D onboard)	0
Cabinet	Cooler Master Elite 120 Advanced	2,977
PSU	Cooler Master Thunder 450W	2,696
Speaker	None	0
Optical Drive	Samsung 22x SATA DVD Writer	950
Mouse	Microsoft Desktop 2000 wireless combo	1,870
Keyboard	Bundled	0
Sound Card	None	0
<b>Total</b>		<b>₹30,046</b>

## ENTRY-LEVEL GAMING

Processor	AMD A10-5800K	8,900
Motherboard	ASUS F2A85-M-LE	6,200
RAM	G-skill F3-10600CL9S-4GBNT	3,000
HDD	Seagate Barracuda 1TB	4,000
Monitor	AOC I2251FWE IPS	8,350
Graphics Card	None	0
Cabinet	NZXT Gamma	2,490
PSU	Cooler Master Thunder 450W	2,656
Speaker	F&D F680	4,890
Optical Drive	Samsung 22x SATA DVD Writer	950
Mouse	Amkette Ash Black (Bundle)	0
Keyboard	Amkette Ash Black (Bundle)	500
Sound Card	None	0
<b>Total</b>		<b>₹41,936</b>

## MID-RANGE GAMING

Processor	Intel Core i5-3470	13,674
Motherboard	Gigabyte GA-B75M-D3H	4,600
RAM	Kingston HyperX 8GB (KHX1600C10D3B1/8G)	5,200
HDD	Toshiba 1TB DT01ACA100	4,390
Monitor	BenQ G2420 HD	10,500
Graphics Card	Nvidia GTX 750 Ti	12,000
Cabinet	Antec One - S3	3,260
PSU	Seasonic S12 II 620 Watts	6,150
Speaker	F&D F680	4,890
Optical Drive	Samsung 22x SATA DVD Writer	950
Mouse	CM Storm Devastator (Bundle)	3,100
Keyboard	CM Storm Devastator (Bundle)	0
Sound Card	None	0
<b>Total</b>		<b>₹68,714</b>

## ULTRA HIGH-END GAMING

Processor	Intel Core i7-4770K	23,700
Motherboard	ASRock Z87 Extreme4	14,399
RAM	Kingston HyperX Beast DDR3 16 GB RAM (KHX18C10AT3K2/16X)	18,725
HDD	WD WD30EZRX 3TB + Samsung 840 Pro 256 GB	23,852
Monitor	BenQ GW2760HS	18,800
Graphics Card	ASUS GTX 780TI GTX780TI-3GD5	58,499
Cabinet	Corsair Obsidian 900D	25,499
PSU	Cooler Master V1000	14,199
Speaker	Logitech Z906 5.1	21,700
Optical Drive	LG Blu-ray WH16NS40 RW	6,000
Mouse	ROCCAT Kone XTD	5,200
Keyboard	Corsair Vengeance K95	9,699
Sound Card	ASUS Xonar Phoebe	10,500
<b>Total</b>		<b>₹2,50,772</b>

## OPTIONAL ACCESSORIES

Surge Protector	Belkin 6 Socket Surge Protector	936
Controller	Xbox 360 Controller (wired)	2,250
UPS	APC 1000VA - BR1000G-IN	8,500
Webcam	Microsoft LifeCam Cinema	4,900
Headphones	KOSS Portapro	3,870
Mousepad	Razer Goliathus Fraggged Control	940
Wireless Router	TP-LINK TD-W8968	2,349
Sound Card	ASUS Xonar Essence STX	10,800
External DVD-Writer	Lite-On eUAU108	1,800
Thermal Paste	Arctic Silver 5 (3.5 grams)	600
CPU Cooler	Cooler Master Hyper 212X	2,649
Fan Controller	NZXT Sentry Mesh	1,695
Case Fan	Noctua NF-F12	1,227
<b>Total</b>		<b>₹42,516</b>



**Price watch**

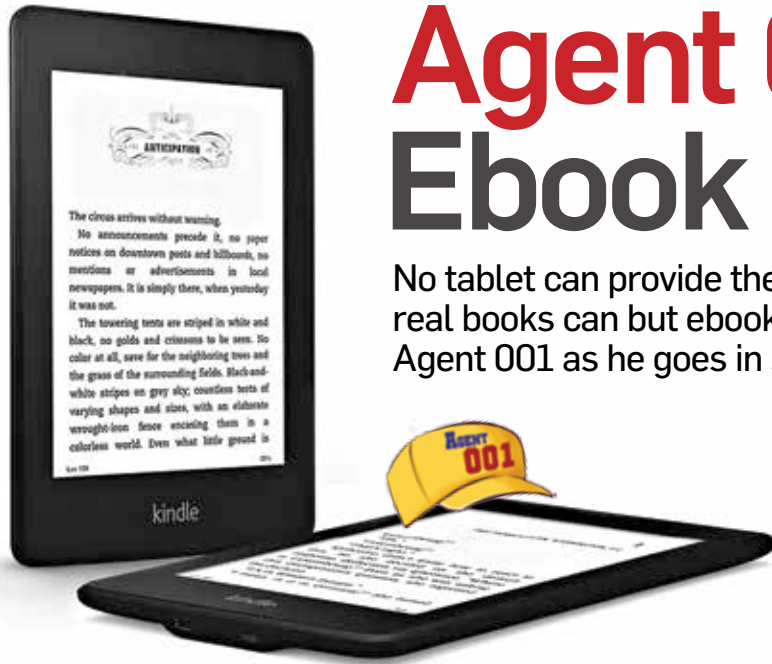
Find the best portable, stereo or surround speaker sets for your budget to listen to your tunes.

**Dual OS phone**

Spanish based Geeksphone to sell "Revolution" with either Android or Firefox OS. [digit.in/DualOSPhone](http://digit.in/DualOSPhone)

# Agent 001: Ebook readers

No tablet can provide the same reading experience that real books can but ebook readers come close. Follow Agent 001 as he goes in search for the best ebook reader.

**Agent 001**

[agent001@thinkdigit.com](mailto:agent001@thinkdigit.com)

**W**ith the digital age comes information overload leading to reduced attention spans. This trend especially resonates with reading, whether it's done on a screen or paper. There's always so much to read, with the added complexity (or confusion) of deciding what to read that's a perennial nuisance of our time. Thankfully, technology enables us to have dedicated reading devices – that aren't tablets – to make reading more convenient, versatile and comprehensive than it's ever been. Physical books are out, ebooks are in. And frankly there aren't many devices to choose from if you're thinking of purchasing an ebook reader.


To answer a very common question I'm asked all the time, concerning whether buying a tablet is better than buying just an ebook reader, here's what I think. If you're really concerned about reading, and you're purchasing a device with that as your primary focus, then an ebook reader is definitely better than any tablet ever made. Because of one simple reason – its screen. Where traditional

iPads and Android tablets have backlit displays, ebook readers like the Amazon Kindle, Kobo Glo, Barnes and Noble Nook, etc., come equipped with an e-ink display. These specialized displays best mimic the effect of "reading on paper", performing better under direct sunlight, with almost zero eye-strain over extensive reading as compared to backlit displays which are notorious for inviting eye fatigue very quickly. For this one reason alone, it's recommended to pick up a dedicated ebook reader if you want to make a shift from reading traditional books (save trees?) to ebooks.

When you make up your mind to invest in an ebook reader, try and understand that you're not buying a stripped down tablet – not by a long shot. Ebook readers like the Amazon Kindle and Kobo Glo at best will let you browse the web, but that's about all they can do apart from letting you read ebooks – so set your expectations accordingly. But to give them some credit, ebook readers do come with features that complement the activity perfectly – like a built-in thesaurus, Wikipedia support, highlighting of text, saving custom notes, and basic bookmark. Good enough to make you consider dropping the printed

book altogether, eh? Before I get down to recommending which ebook reader to buy, also pay heed to the fact that ebook readers are nothing but a platform for companies like Amazon, Kobo and Barnes and Nobles to sell books on. Unless you have alternate sources of procuring your ebooks (cough cough), the supported store's variety, comprehensiveness and prices of books will go a long way in deciding which ebook reader you'll ultimately pick. And for this single reason alone, there's no reason to consider anything else but the Amazon Kindle, if you ask me. Their latest Kindle Paperwhite (2013 edition) just launched in India, and it remains the iPad of the ebook reader world, so to speak. What's more, Amazon Kindle's app (and Whispernet feature) ensures all authentic books purchased through Amazon are synced and updated across all supported devices, including tablets, smartphones and PCs.

However, if you're looking at extensive file format support, social sharing features, and other cosmetic aspects that matter to your tastes, I recommend the Kobo Glo – we have no complaints from the Glo as far as its hardware capabilities are concerned. In many ways, it's better than the Kindle Paperwhite, since it offers microSD card support to expand built-in storage and some other features I mentioned above.

If you want an ebook reader with Indian language support, try going for the Infibeam Pi 2 or the Wink ebook reader. They're good too and won't disappoint. 



## GoPro to go public

After Box and Twitter, the camera maker is the latest technology company to file for a secret IPO. [dgit.in/goproipo](http://dgit.in/goproipo)



## 3D printers FTW!

A teenager crafted a working 3D-printed prosthetic hand for a disabled nine-year-old boy. Read more: [dgit.in/3DHand](http://dgit.in/3DHand)

Agent 001

## Gaming and Mining

I want to buy a graphics card. My budget is between ₹6000 to ₹10000 and I can't stretch it further. I will primarily be gaming on my PC but I also want to mine bitcoins using it.

My current rig specifications are:

- Processor: Intel Core i3 3.06 GHz;
- RAM: 2x2 GB DDR3;
- GPU: ZOTAC 8400 GT
- HDD: Seagate Barracuda 7200.12 500 GB
- Motherboard: ECS H55m

*Rudrashis Gorai*

**A** The GTX 750 and 750 Ti were recently released and would be most suitable for your budget. Mining bitcoins on GPUs is no longer feasible and you'll end up spending more money in terms of electricity cost rather than making any profit.

## Budget smartphone needed

Hi, I want to buy a smartphone and my budget is between ₹10,000 to ₹11,000. I don't know much about smartphones and so it would be great if you can point me in the direction of the best smartphone for my price range.

*Sayan Kumar Dey*

**A** Since you haven't mentioned about any preferences that you may have when it comes to selecting a mobile OS, we would suggest you to go for the Nokia Lumia 525 which is available for about ₹10,500. The Lumia 525 was recently launched in India, is a very stable phone and is easy to use.

Windows Phone has an easy to understand user interface and so it will work well for you as you don't know much about smartphones. Another option that you can consider is the Karbonn Titanium S5 Plus which runs on Android and has decent specifications while also being a Dual SIM phone.



## Laptop in focus

Hi, I have a budget of ₹30,000 and I want to buy a laptop that should at least have the following specifications:

- 4GB RAM;
- 500GB Hard Drive;
- GPU with a 2GB VRAM;

I don't have any particular brand preferences so please suggest something that fits my requirements and performs well.

*Pankaj Kumar*

**A** Looking at your budget and your requirements, we have two recommendations for your needs. The first is the Dell Inspiron 15 3521 which comes with an Intel Core i3 - 3217U processor, 4GB RAM, 15.6" screen and a 500GB HDD and it will set you back for ₹29,600 but the graphics

will be integrated. If a discrete graphics card is an important priority for you then in that case, you should take a look at the HP Pavilion G6 2302 which will cost about ₹29,500. It comes with an AMD A4 Dual Core APU clocked at 2.5GHz with 4GB RAM, 500GB HDD, and Windows 8.1 straight out-of-the-box. The critical bit here is that it has got switchable graphics which switches between the AMD Radeon 7420G that is the integrated GPU and the Radeon 7670M 2GB discrete card. Go for any laptop that you prefer between the two, you won't be disappointed.

## Best router?

I am on the lookout for a router for home cum office use and I want to go for the best one that I can get. I've allocated a maximum budget of ₹20,000 for it and would like to buy something that is high on features while also being a good performer and provides exceptional wireless range. It would be great if you recommend a router that supports the latest 802.11ac technology.

*Sanjay Prajapati*

**A** At a budget of ₹20,000, you can pretty-much get the best router available and go for the ASUS RT-AC68U. The RT-AC68U though costly, is an excellent performer, has a decent wireless range and is very feature-rich. In fact, the ASUS RT-AC68U was the winner of our router comparison test and was also awarded the "Zero 1" award for being the best performing router of all time. Available for about ₹18,000, the RT-AC68U also supports 802.11ac technology. **E**



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**Battery** 4000 mAH Battery Power Bank **Router** Broadband Router for Cable Internet **Hotspot** Wireless hotspot for Media and Internet sharing

DG-HR1160M



**Amazon buys game studio**  
Amazon's recent acquisition of Double Helix points at the retail giant's interest in developing games for Android.



**Firefox to have adverts**  
The tile interface in Firefox might start seeing sponsored content being published soon. [dgit.in/MozAdvt](http://dgit.in/MozAdvt)

# SPEND SMART

This month we have portable, stereo and surround speakers for you. Choose the best set depending on your budget.



## PORTABLE

Brand	Model	Configuration	Battery Type	Max Output (in Watts)	Chassis Material	Frequency Response	Price (in ₹)
Creative	D100	Stereo	AA	NA	Plastic	20-20,000 Hz	4,865
Creative	AirWave HD	Stereo	Li-ion	20 W	Metal + Plastic	NA	14,529
Bose	SoundLink Mobile Speaker II	Stereo	Li-ion	NA	Metal + Plastic	NA	20,138
Bose	SoundLink Mini	Stereo	Li-ion	NA	Plastic	NA	16,200
Edifier	Bric Connect	Stereo	AA	12 W	Plastic	40-20,000 Hz	6,699
Edifier	Extreme Connect	Stereo	Li-ion	4 W	Plastic	190-18,000 Hz	5,599
F&D	Swan	Mono	Li-ion	2 W	Plastic	60-20,000 Hz	2,040
HMDX	Jam Party	Stereo	Li-ion	NA	Plastic	NA	7,990
HMDX	Jam Plus	Mono	Li-ion	NA	Plastic + Metal	NA	3,990
HMDX	Jam Classic	Mono	Li-ion	NA	Plastic + Metal	NA	2,900
iBall	Xpresso	Stereo	Li-ion	2 W	Plastic	100-20,000 Hz	870
iBall	OPUS	Mono	Li-ion	4 W	Plastic	150-80,000 Hz	1,728
Jabra	Solemate Mini	Stereo	Li-ion	3 W	Plastic	NA	3,999
JBL	Micro II	Mono	Li-ion	3 W	Plastic	150-20,000 Hz	1,189
JBL	Flip	Stereo	Li-ion	10 W	Plastic	150-20,000 Hz	5,199
JBL	Pulse	Stereo	Li-ion	12 W	Plastic	100Hz-20,000 Hz	14,990
JBL	Charge	Stereo	Li-ion	10 W	Plastic	150Hz-20,000 Hz	9,990
JBL	Flip 2	Stereo	Li-ion	12 W	Plastic	100-20,000 Hz	6,990
Logitech UE	Boombox	Stereo	Li-ion	NA	Metal + Plastic	55 – 20,000 Hz	12,498
Logitech UE	Mobile Boombox	Stereo	Li-ion	NA	Plastic	150-18,000 Hz	4,389
Logitech	Mini Boombox	Stereo	Li-ion	6 W	Plastic	NA	3,999
SoundLogic MTV	Soundbox	Stereo	Li-ion	6 W	Plastic	NA	3,999
SoundLogic MTV	Twister	Mono	Li-ion	3 W	Silicone + Plastic	NA	2,999
Portronics	Pure Sound BT	Stereo	Li-ion	NA	Plastic	NA	2,531
Portronics	Drums	Stereo	Li-ion	2.5 W	Plastic + Metal	NA	3,290
Sony	SRS-BTM8	Stereo	AA	4 W	Plastic	NA	4,791
Skullcandy	Ringer 2XL	Mono	Li-ion	2 W	Plastic	NA	1,759
iBall	UFO3	Mono	Li-ion	NA	Plastic	100-20,000 Hz	2,499
Umeko	Dynamo	Stereo	Li-ion	10 W	Plastic	NA	1,874
Umeko	Pebble	Stereo	Li-ion	10 W	Plastic	40-20,000 Hz	1,530
Umeko	Supremo	Mono	Li-ion	5 W	Plastic	NA	1,324
Xmini	X-mini II	Mono	Li-ion	2.5 W	Plastic	100-20,000Hz	1,699
Zebronics	NITRO	Stereo	Li-ion	5 W	Plastic	80-20,000 Hz	999
Zebronics	ZEB-BT012	Mono	Li-ion	NA	Plastic	NA	1,054
Zoook	Air Drum ZB-BS100	Stereo	Li-ion	6 W	Plastic	60-20,000 Hz	2,495





### The world's largest solar plant

Take a look at some of the most amazing images from Ivanpah Solar Facility that's co-owned by Google. [digit.in/1cBKJcy](http://digit.in/1cBKJcy)



### The Whatsapp story

Facebook bought Whatsapp for US \$19bn, but how did it all happen? All the important details from behind the scenes: [digit.in/1l4akmE](http://digit.in/1l4akmE)

Price Watch



## STEREO

Brand	Model	Configuration	Max Output (in Watts)	Chassis Material	Frequency Response	Price
Audioengine	A2	2.0 Channel	60 W	Metal	65-22,000 Hz	14,686
Audioengine	A5+ Bamboo	2.0 Channel	150 W	Wood	50-22,000 Hz	33,182
Circle	Aura	2.1 Channel	28 W	Plastic	NA	3,665
Circle	CT- 2.103	2.1 Channel	40 W	Plastic	55-20,000 Hz	3,850
Creative	SBS A120	2.1 Channel	9 W	Plastic	50-20,000 Hz	1,599
Creative	GigaWorks T20 Series II	2.0 Channel	28 W	Plastic	50-20,000 Hz	7,999
Creative	GigaWorks T40	2.0 Channel	28 W	Plastic	50-20,000 Hz	11,900
Creative	GigaWorks T3	2.1 Channel	NA	Plastic	30-20,000 Hz	14,999
Edifier	X220	2.1 Channel	22 W	Plastic	50-20,000 hZ	1,780
Edifier	M1385	2.1 Channel	28 W	NA	50-20,000 hZ	2,590
Edifier	P2060	2.1 Channel	30 W	Plastic	NA	2,620
F&D	U213A 2	2.0 Channel	3.6 W	Plastic	NA	475
F&D	V520 2	2.0 Channel	4 W	Plastic	40-20,000 Hz	690
F&D	F680	2.1 Channel	70 W	Plastic	20-20,000 Hz	4,890
F&D	V620 plus	2.0 Channel	4 W	Plastic	90-20,000 Hz	1,169
Genius	SW-T2.1 1800	2.1 Channel	50 W	Plastic	50-20,000 Hz	3,850
iBall	Tarang Lion	2.1 Channel	40 W	Wood	20-20,000 Hz	3,100
Intex	IT 2475 Beats	2.1 Channel	40 W	Plastic	20-20,000 Hz	2,240
JBL	Creature III	2.1 Channel	20 W	Plastic	50-50,000 Hz	2,695
Klipsch	ProMedia	2.1 Channel	200 W	Fibre	31-20,000 Hz	11,865
Logitech	Z313	2.1 Channel	25 W	Plastic	NA	2,885
Logitech	Z623	2.1 Channel	200 W	NA	NA	9,450
Mitashi	HT 44 FUR	2.1 Channel	36 W	Plastic	50-20,000 Hz	2,390
Sony	SRS-D9	2.1 Channel	60 W	NA	50-20,000 Hz	5,580
Zebronics	SW3200RUCF	2.1 Channel	44 W	Plastic	20-20,000 Hz	2,377



## SURROUND

Brand	Model	Configuration	Max Output (in Watts)	Chassis Material	Frequency Response	Price
Creative	Inspire T6160	5.1 Channel	50 W	Plastic	40-20,000 Hz	4,549
Edifier	Multimedia M3500	5.1 Channel	64 W	Wood	NA	6,289
F&D	F3000U	5.1 Channel	79 W	Wood	20-20,000 Hz	4,959
Genius	SW - HF6000	5.1 Channel	200 W	Wood	40-20,000 Hz	16,500
Mitashi	HT 90 FU	5.1 Channel	70 W	Wood	40-20,000 Hz	4,480
Zebronics	ZEB-SWT9100RUCF	5.1 Channel	NA	Wood	20-20,000 Hz	9,989
iBall	Booster	5.1 Channel	120 W	Wood	20-20,000 Hz	6,399
Intex	5850 SUF	5.1 Channel	80 W	Wood	20-20,000 Hz	5,320
Logitech	Z906	5.1 Channel	500 W	NA	35-20,000 Hz	25,199
Philips	DSP 56U	5.1 Channel	75 W	Wood	20-20,000 Hz	5,999



# Five software to simplify your work environment

Managing a SOHO on your own can be quite taxing so here are a few software that can lessen the burden and optimise your work environment

Mithun Mohandas  
[readersletters@tbinkdigit.com](mailto:readersletters@tbinkdigit.com)

When it comes to a SOHO you are pretty much on your own. One does not have the luxury of hiring someone to take note of each and every aspect down to the smallest details. This is where software like the ones we've mentioned below come into the picture and make your work process a lot simpler and streamlined. So much that you can pretty much run a one man show with the efficiency of a multinational (Maybe that was a tad too exaggerated but you get the picture). These tools may not be better than your "system" but for those who don't have a system in place, this sure is a great place to start. Instead of focusing on separate tools we'll be looking at categories of software for simplifying your work environment.

## Project Management Tool

A project management tool helps you organise your resources together and allocate them in an efficient manner. After completing a few projects one can

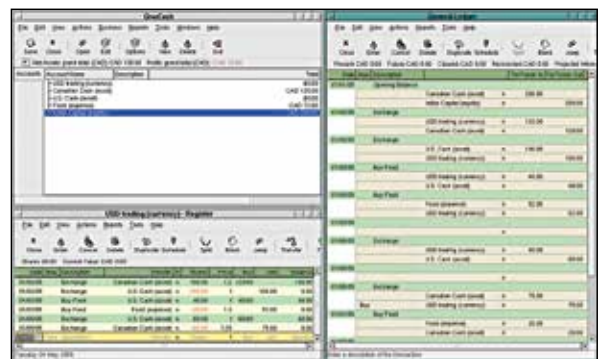
estimate the cost and time parameters of each task and thus figure out a pattern of completing tasks simultaneously rather than in a linear fashion. With the usual set of features like remote access and collaboration access the complexity of planning a project is greatly reduced and becomes more streamlined. Another aspect introduced is that of accountability since each and every action to be performed is recorded, it becomes easier to accurately pinpoint where delay/loss tend to occur and thus, allocate more resources to better handle that particular task.

The functionality of a CRM overlaps with that of a project management software because a CRM is basically a project management software where the "projects" are your customers. Ideally you should make do with just one software as it adds familiarity and subsequently your employees don't spend all their time fiddling around with 10-15 software instead of getting some actual work done.

A popular project management tool is Basecamp (<https://basecamp.com/>) is one such software that follows a monthly subscription approach with the cheapest plan costing \$20/month. One can opt for Canonical's Launchpad or Edgewall's Trac which are open source and quite popular. Although most of these software are geared towards managing software projects, you can

easily find one which caters to a much general approach.

An enterprise solution like Vtiger CRM actually has both project management and CRM modules which are interlinked. Interoperability is one more facet which justifies the use of one software for getting everything done.



GnuCash – For all your accounting needs.

## Accounting software

Face it, you can't code, manage all your employees and take care of the finances all by yourself without some help. Also, there are an incessant number of things you need to keep in mind when dealing with anything money related. One little goof-up and you'll have the taxman at your door for an audit. So you can either hire a team of five-six accountants or you could simply get one or two accountants and use an accounting software. The folks behind these software keep an eye out for changes in taxation and other rules. So instead of having to go through years of account books for any reason whatsoever, you can simply opt for the latest update for your accounting software and all your accounting standards (tax rules and all) will be updated according to the new standards. You don't have to send your accountants out for an expensive



ActivTrak's report web interface.



## Activision making big bucks

Driven by the strong sales of its Call of Duty titles during the holidays, Activision Blizzard Inc posted supernormal fourth quarter income. Its stock rose to a five-year high.



## Mutant indian scooter

The new Hero RNT scooter is like a mini stationwagon that has many features  
<http://dgit.in/merahero>

Smart SoHo



Backlog – streamline and keep track of all your projects.

training session every year that has a new set of taxes being introduced.

GnuCash (<http://www.gnucash.org/>), is one such open source accounting tool which allows for double-entry accounting, management of stock / bonds and other investment accounts, generation of reports and graphs and even schedule transactions. Now if you were under the impression that accounting bank transactions need to be done manually then you'd be surprised that if you bank supports QIF/OFX/HBCI imports then you can download your transaction history and sync GnuCash to do it according to a schedule. While actually getting a transfer done requires multiple levels of verification, the records of the same will be reflected in your account books instantly.

## Monitoring software

Monitoring software is where you get to put the squeeze on delinquents (harsh word for slackers!). This however, is not the primary usage scenario for such software, instead it is used to ensure that your sensitive company secrets don't make it outside your control zone. Leaks may happen due to carelessness or because someone takes an initiative to do so, these software monitor each company computer for regular updates, malware checks, activity logs and other attempts to plug data loss. Whether it could be a temporary move or

a permanent one is your decision but we're just putting it here since it is one of the most commonly used software in companies.

It's difficult to get an open source alternative for this category since a complete solution involves multiple software. Which is why, opting for individual open source software for each aspect makes more

sense. For installing web filters you can use Squid Proxy and SquidGuard which is a URL redirector. Or you can set all your company computers to use OpenDNS and then manually set filters, however, this gives the employee control over what you get to monitor. For activity monitoring you can use ActivTrak which gives you a web based dashboard to look at reports and employee screenshots.

## Storage management

From contacts, leads, accounting details, tax history to every other thing under the sun, it's the data that gives your company the advantage over your competitors and losing the same would be disastrous. Which is why you should invest in a high end NAS or at least setup a NAS on your own using FreeNAS. We've covered this before so you can check our back issues for the same.

Data synchronisation with a NAS storage is not a constant affair unless you don't store files locally at all. So making use of Dropbox or Google Drive on your

computer to save your work is a prudent move. However, these services make use of deduplication which does offer some privacy concerns. This is why sensitive documents are better off in NAS storage which in turn can be synchronised with an online storage service that you've purchased.

## Office suite

We don't know of any work environments that can do without a word processor, a spreadsheet software and other tools which make up an office suite. This segment has developed quite well and you have a host of options. You can use OpenOffice which supports all the popular file formats but moving files between two different software has often led to a skewed presentation of the document visually. So making use of an alternative is helpful, there are plenty of free alternatives like Apache Office, LibreOffice or even better – Google Drive which allows collaborative editing.

The software we've mentioned are needed for most offices out there, though



LibreOffice is an incredible open source office suite.

your core service might need more that what we've listed out here. Obviously you've tested out some which are even better than the ones we've mentioned here. Do write in to let us know.



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**Apple's reigniting growth**

And it's focusing on electric cars, medical devices and not just wearable electronics to recapture the world's imagination [dgit.in/1oHLPvN](http://dgit.in/1oHLPvN)

**WP8 to run Android apps**

Some sources suggest that Microsoft is considering integrating Android apps on its Windows and WP8 platforms.

# In conversation with Adobe

We spent an afternoon chatting up with Adobe's Paul Burnett and Karl Soule, both distinguished creative professionals in their own right, to try and understand Adobe's take on 3D printing, Exclusive excerpts from our interview:

Jayesh Shinde

[jayesh.sbinde@thinkdigit.com](mailto:jayesh.sbinde@thinkdigit.com)

**Adobe Photoshop is traditionally recognized as an advanced 2D design software. How do you see it adapting to the disruptive phenomenon of 3D printing?**

**Paul:** So, a few years ago we added 3D to Photoshop and have improved upon it since then, and the reason we did that because there wasn't any tool in the market that enabled 3D artists to easily work on the textures of 3D objects. Most of the apps like Studio, Maxx, etc, allowed you to output a texture mesh but it's really difficult to paint on them. Photoshop gave those people a way to bring those models in and work visually on the textures almost as if they were picking up a 3D model with a paintbrush and painting on it. That really attracted a lot of people who worked with 3D.

So yeah, you can build simple 3D stuff, but I wouldn't build anything complex in Photoshop, instead I'll use the 3D tools out there to do some manipulation and enhancement of the 3D models. As soon as we added 3D support in Photoshop, we found people were using 3D models in their compositions.

Also, people always think of Photoshop to be this photo manipulation tool, but it also has video editing capabilities. Bringing video, audio, and 2D PSD compositions is a big part of Photoshop as well. And the beauty of it is that I can bring all the power of Photoshop still editing (layer effects, blend modes, etc) into my videos in Photoshop. So really it's a much bigger tool than just used for photo manipulation – it's also for 3D.

**Karl:** We hear a lot of people say that they only use 20 per cent of Photoshop and one of the key things about it is that the 20 per cent you use may be different from 20



Adobe's Karl Soule (L) and Paul Burnett (R) showing off 3D printed objects.

per cent I use or 20 per cent that someone uses. It's clearly one of those things that anybody who's creative has a copy of on their desktop. It's a one-stop shop for a lot of things. It's amazing how it's evolved over the years and how it's continuing to grow in the whole 3D printing space.

**With the consumerization of 3D printing, how do you see Photoshop (or other Adobe products) giving creative professionals the power to do?**

**Paul:** Obviously, there's a huge emerging interest in 3D printers. As the technology becomes better, the cost comes down and they become more accessible to the general public. They want a way to be able to easily create their own content, whether it's buying their own 3D printer or whether it's doing it through someone like Shapeways.com. The ability to print something in 3D is simply pretty cool. And for a variety of reasons people want to be able to do that. We saw that there was a real gap from tooling to simplifying the process. So just grabbing a 3D model and often a lot of 3D software

is quite complex for people to get into. So giving people the ability to use models for manipulating very simply, giving them an interface to manipulate textures and compositing different elements together is important – and Photoshop does all that. It's a tool they're all already used to and it gives them the ability to create and enhance those 3D elements, and then just simply print it – whether it's a local 3D printer or an online one. And the response from the industry to this Photoshop feature has been phenomenal.

**Karl:** I really think this is going to be one of those pivotal moments how desktop publishing or digital video was, where you kind of look back on the old way of doing things and in the long run having a common platform to make sure things will be able to print properly, to have the ease of use that Photoshop's providing is going to be a big deal moving forward.

To read the entire interview, head over to this link: <http://dgit.in/AdobePaulDgt>

## Unwind

Read about AI's that saved the world and Digit Diary where we chronicle daily life at the Digit office.



## Apple Heads?

Apple seems to be interesting in making your head its next app. Yes. Your head. Read on to know more: <http://digit.in/applhds>



This month we highlight some aspiring tech writers and their spirited attempt to get published in the magazine. Let's have more!

# Readers' write-ups



Dileep  
Mohanan

## Wacom Inkling Review

### What does it do?

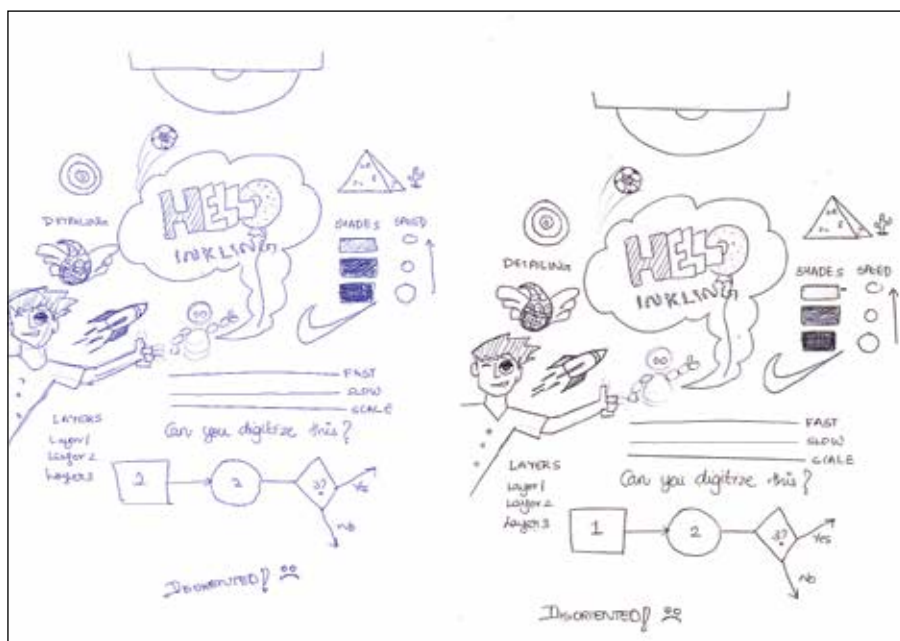
Inkling is an incredible product from Wacom meant to revolutionize the way you sketch – it

digitizes what you sketch while you sketch. It digitizes the sketch from the paper as you sketch it, thus saving those precious hours that you spend trying to recreate the same sketch using a digital tool! Inkling comes in a sleek case with a neat layout to fasten the components – pen, Inkling receiver, USB cable and 4 extra refills. It is, surprisingly, smaller than a pencil box. You can charge the pen and receiver simultaneously by connecting the case to your PC through USB.

### How does it work?

To start sketching, you need to firmly clip the receiver to the paper(s) (size A7 to A4). It can be clipped at different positions – top (default), bottom, sides and even corners. The position must match with the orientation that is currently active in the driver software.

When everything is firm and set, start sketching as you would normally. The pen might be uncomfortable to hold due to its size. The pen doesn't have an eraser but Inkling supports Photoshop layers. A hardware button lets you add layers but not move/select them. The software bundled – Sketch Manager lets you browse through your works stored in the device and allows you to export it to many image formats, including Photoshop (while retaining the layers). The device has an internal memory of 2GB. Inkling uses infrared and ultrasonic to



A side-by-side comparison of digital output (L) and actual sketch (R)

achieve this level of accuracy. Hence you need to be careful about a few things. First, you must not block the IR communication between the sensor and pen with your hand, eraser or any other object. Second, direct sunlight will distort the IR, hence it's advised to protect it from direct sunlight – limiting your outdoor sketching. And third, the orientation of the sensor and the option defined in the driver must be the same to avoid any distortion in tracing the pen movement.

### Real life performance

#### Line quality

You have to be swift with the lines. Lines drawn with less pace will have a lot of sketch-marks in its digital version.

Bigger and swiftly drawn lines are better and smoother.

### Shading

Inkling's pressure sensitivity is disappointing. All your lines will have the same opacity. The construction lines you make will be visible just like your final render which is a let down.

Amidst all these precautions, the inkling does a wonderful job. The accuracy it provides is pretty decent. Future versions are sure to win some artistic hearts.

**Design:** 7.5/10; **Features:** 5/10; **Usability:** 7/10; **Overall:** 6.5/10;

#### Tested In:

**OS:** Windows 7/8.1 x64, Mac Mountain Lion; **Software:** Adobe Photoshop CS5, Autodesk Sketchbook.

*Disclaimer: The views expressed in this section are of the respective Digit Squad members. Neither Digit nor 9.9 Media takes no responsibility of their claims whatsoever.*



## E-mail etiquette

Getting bombarded with a hundred e-mails a day is the norm. Here's how to do it right:  
<http://dgit.in/1bDbtyl>



## Rise of the robots

Will robots really take over the world? Google seems to think so.  
<http://dgit.in/1hnVIcM>

# AI's that saved the human race

All sentient A.I. is not evil, our fiction is filled with instances that highlight the pure selflessness and dedication that is the hallmark of the truly sentient and friendly A.I.



### Athena

When an advanced alien race decides that it's high-time the human race met its doom, they decide to unleash the mother of all sun storms on the hapless human race. Hapless? Maybe not. Not with Athena around. A sentient A.I. that has been taking care of the human race for generations, she first appears in Arthur C. Clarke's epic book, Sunstorm.

### Cortana

Beginning life as a shipboard A.I. and assistant to the captain of the Pillar of Autumn. When things take a turn for the worse, she proves to be pivotal in the rescue of the human civilization from the ravaging Flood and the extremist Covenant. She is now as much the mascot of the Halo series as Master Chief himself. A better looking mascot too.



### Karan S'jet-sa

While Karan S'jet (as she's more popularly known) is not exactly an A.I. in the traditional sense of the term, she is in many ways the ultimate step in the evolution of humans and A.I. A merging of intellect. Karan S'jet of the Homeworld series is Sajuuk-Khar, the chosen one. A creature that brings peace to the galaxy, the Age of S'jet.



### HALMAN (HAL 9000)

An A.I. that has transformed from murderer to martyr to saviour of the human race, one that finally merged with an ancient, but ridiculously advanced alien artifact and the "soul" of a dead spaceman. Such an A.I. has been through a lot and for it to sacrifice itself a second time to save the human race indicates a very noble nature indeed.

### Deep Thought

If the other A.I.s here have saved the human race, Deep Thought is the A.I. that's been responsible for the creation of the human race. Designed to find the answer to the "Ultimate question of life, the universe and everything". It finds the answer (42), but it doesn't know the question. The Earth is a result of the quest to find that very question.



### EDI

Mass Effect is considered by many to be one of the best trilogies in gaming history and while Shepard may be the hero, EDI is the side-kick that provided the support that kept that said hero alive. A sentient shipboard A.I. that finally acquires a physical form, EDI has saved the known (game) universe many times with her hacking (and combat) skills.



## Loop the loop

The first human being to actually loop the loop; watch the video here:

<http://dgit.in/1k2gC2Q>



## The wild side

Here's how Jimmy Kimmel pranked the world's press.

<http://dgit.in/1mzkq07>

Unwind

# How we unwind



## Warcraft III: TFT

While late night Quake sessions are the norm at Digit, but once in a while we get bitten by a new bug and we try something else. One such recurring bug is Frozen Throne, a game that always seems to pop up when we get a receptive intern and this time, it was the Pony who reintroduced it to us. We've had some really fun nights.

## Buggle it!

We're all music aficionados in one form or the other and are always on the quest for new music. Online radio is appealing, but the region-locked services can be a pain at times. Siddharth's discovery of the Buggles feature has transformed the way we listen to music. Bye-bye Grooveshark. It was nice knowing you.



## Boys n' Toys!

There is a little child in all of us and thanks to Funschool, the little boy came rearing out. Why? We got our hands on a Scalextric race kit, that's why (check out the feature in DGT). Sending miniature plastic cars zipping around a small, figure of eight track was so much fun, we didn't know when to stop!

## digit DIARY

This being Feb, it's been a hard month at Digit, three days less means that our already tight deadlines are now tighter and the handful of sleepless nights we spend turn into more than that. We also suffer a grievous loss this month, something that we've kept for last. Thankfully, we work at Digit, so there's never a dull day. A continuous trickle of fascinating new gadgets keep us coming back for more, regardless of how tired and exhausted we are.

Speaking of exhaustion, Raaabo popped over for a bit. Since the time he's turned into a father (a doting one we might add), he's been enduring more sleepless nights than anyone on the team and it was a surprise to see him back in the office. As it turns out, the Raaabo who came back wasn't the Raaabo of three months ago. He's changed, he goes pottering around the office, not unlike Emsworth, pulling out stray strands of hair from our copy editor's head and talking babies with anyone who'll lend a sympathetic ear (which is our ear, it's not like we have an choice). We were a little unnerved by his behaviour at first, but we maintained our poker faces and waited for Digit's innate healing powers to restore our erstwhile editor to his usual state. And anyway, it's nothing a game of Quake wouldn't fix.

He's also been deprived of a PC for a while now and has been \*shudder\* surviving on "just" an Alienware 14 laptop. The moment he walked in, he caught sight of Pony's spanking new Alienware 17 review sample, a beast of a machine. As all of you must be knowing by now, Raaabo gets what he wants, always. But not this time.

The Pony was asked to pony up his laptop but luckily (or unluckily as you'll soon find out) for him, he had an ace up his sleeve. The laptop's screen was dead! Further interrogation

revealed that due to some carelessness during a particularly strenuous video rendering session, the Pony had inadvertently roasted the screen. Think about that for a second, that's a laptop worth ₹1.8lakh we're talking about. He did get an earful from Raaabo, but in the end, it was Raaabo who lost out.

In other news, Jayesh got himself a brand new DSLR and he's been snapping away at every opportunity he gets. He's also got the eye of the ancient mariner, holding you in his glittering eye against your will as he mercilessly snaps image after image, saving our hapless images for posterity. It's highly likely that we'll have at least a visual diary for the rest of his tenure at Digit.

There is some very sad news this month. We lose our favourite intern, Siddhant "Ballistic Ant" Sharma to the allure of higher education. A stalwart young lad who's grown by leaps and bounds over the year or so that he's spent at our office. He's gone from a piddly little lad who'd squeal (<http://dgit.in/Op-NAAAs>) at the sight of new hardware to a rampaging young man with a few brave chest hairs poking through his pale skin (<http://dgit.in/1bYAeFH>). He's regaled us with his intellect, stumped us with his answers and thrashed us in Quake (though we do return the favour). He's an intern unlike any we've had before, and most likely never will. It's with teary eyes that we bid him adieu; the Digit TC and this diary will not be the same without him.

This does bring us to another point however, we're in need of fresh minions; ones as hardy and as entertaining as the Ant. If you think you have the curiosity, mettle and drive required to work here (being a geek who can speak and write in English is a given), drop us a mail at [editor@thinkdigit.com](mailto:editor@thinkdigit.com) with the subject line, "Minion for hire", and we'll consider your sacrifice.

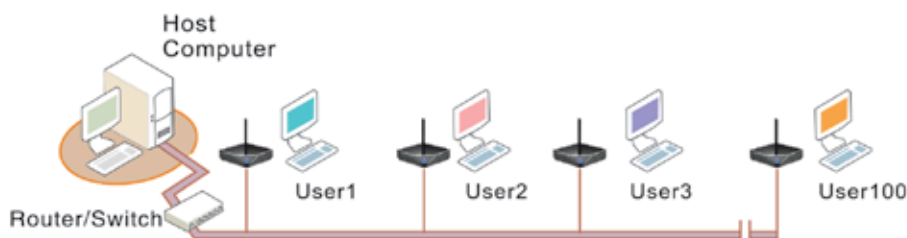
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Requires network protocol  
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- 3GB RAM
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